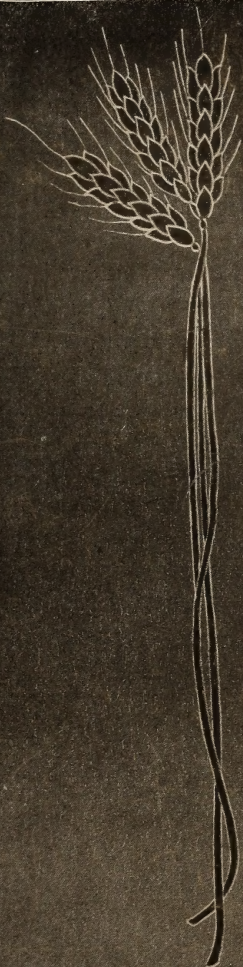


VOLUME XX.



NUMBER 5



THE
O.A.G.
REVIEW

February
1908

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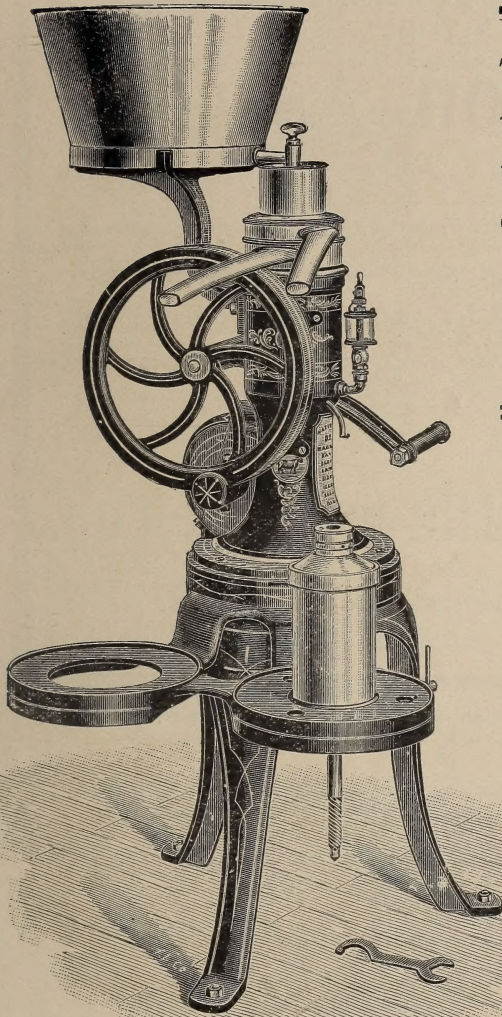
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OFFICIAL CALENDAR

OF THE DEPARTMENT OF EDUCATION.

February:

5. First meeting of High School Boards and Boards of Education. (1st Wednesday in February).
29. Inspector's Annual Reports to Department, due. (On or before 1st March).
- Annual Reports from High School Boards, to Department, due. (This includes the Financial Statement). (On or before 1st March).
- Financial Statement of Teachers' Association to Department, due. (On or before 1st March).
- Separate School supporters to notify Municipal Clerks. (On or before 1st March).

March:

31. Night Schools close (Session 1907-1908). (Close 31st March).

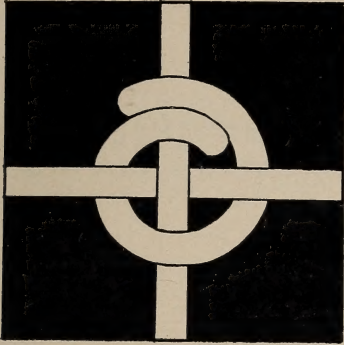
April:

1. Returns by Clerks of Counties, Cities, etc., of population, to De-

partment, due. (On or before 1st April).

13. Annual examination in Applied Science begins. (Subject to appointment).
15. Reports on Night Schools due (Session 1907-1908). (Not later than the 15th April).
16. High Schools, second term, and Public and Separate Schools close. (Thursday before Easter Sunday).
17. Good Friday.
20. Easter Monday.
21. Annual Meeting of the Ontario Educational Association at Toronto (During Easter Vacation).
27. High Schools, third term, and Public and Separate Schools open after Easter Holidays. (Second Monday after Easter Sunday).
30. Notice by candidates for the High School Entrance Examination, to Inspectors, due. (Before 1st May).

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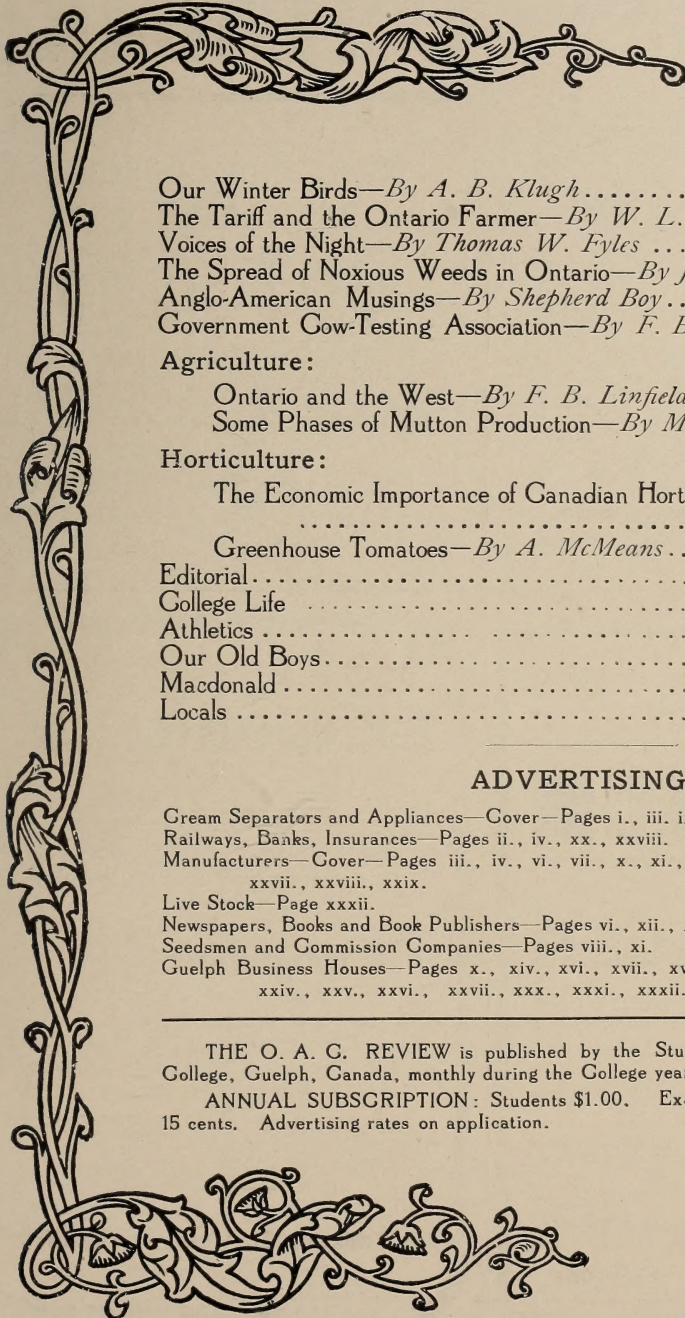
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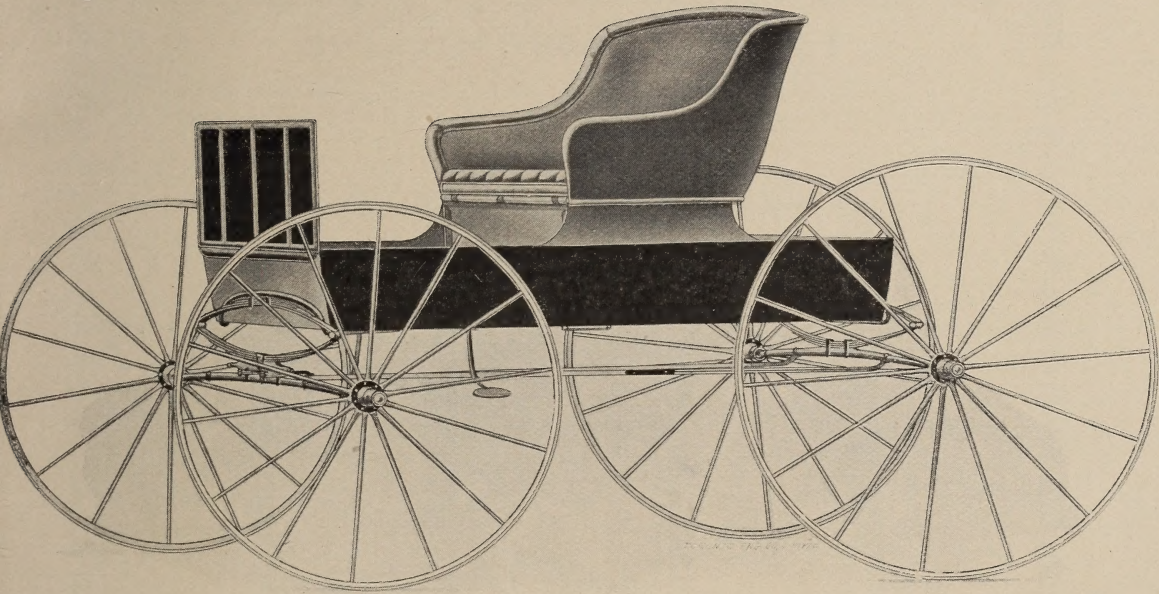
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The O.A.C. Review

THE DIGNITY OF A CALLING IS ITS UTILITY.

VOL. XX.

FEBRUARY, 1908.

No. 5.

Our Winter Birds.

By A. B. KLUGH.

WHILE it is during the summer when insects are making inroads upon the crops that birds are of the greatest use to the farmer, still in the winter there is an immense amount of good work for them to do. There are weed seeds to eat, borers to dig out of trees and eggs and pupae (cocoons) of insects to be dragged out of crevices in the bark and devoured. Though the orchards, groves and fields seem deserted by the feathered tribe during the winter as compared with their abundance in summer, still the list of birds to be seen during the frigid season is not a short one.

Among those commonly seen are the resident species (i. e., those which remain throughout the entire year), Chickadee, White-breasted Nuthatch, Downy Woodpecker, Hairy Woodpecker, Brown Creeper, Blue Jay, Junco and American Goldfinch, and the winter visitors the Tree Sparrow, Redpoll, Pine Grosbeak, Crossbills, Pine Siskin and Snowflake. There are many other

species such as the Snowy Owl, Goshawk, Evening Grosbeak, England Longspur, etc., which visit us during some winters and may not be seen again for several years.

The Chickadees, Nuthatches and Creepers might most appropriately be called "the gleaners," as they glean insects and insects' pupae and eggs from our trees from morning till night, in all weathers, throughout the entire year.

The Chickadee needs no description, as it is well known, and I am glad to say universally protected. The Chickadee is a most lovable little bird, cheery and familiar; it is the same in all weathers and at all seasons, it will come into a bush at your side and look you over at a distance of a few feet and will, if you call it, alight upon your head or shoulder.

The distinctive note of this species, "tsic-a-chikadee-dee-dee" is well known, but its other three notes are not so familiar. They are "zee-zee-zee," its usual note of content, as it executes gymnastic performances on the

branches, a sharp "Tsic" and its minor whistled song "hee-hur" uttered very slowly and deliberately. The song is heard most frequently in spring and least often in winter.

The Chickadee makes its nest in a hole in a dead tree or stump and lines it with feathers, hair and moss. From five to eight eggs, white, speckled with reddish brown, are laid. The young are fed mostly on caterpillars, plant-lice and ants.

A plan for keeping the orchard pests in check which has been tried with great success is to hang pieces of fat, suet, etc., on the trees so as to induce these birds to stay in the orchard all through the winter and to nest there in the spring.

The White-breasted Nuthatch also known by the scarcely courteous, but descriptive name of "Devil Down-head," is about five and a half inches long, slaty gray above and whitish beneath, with a shading of rusty red on the abdomen. Its resounding note of "Quank-quank-quank" may be heard at any season of the year, but is more noticeable in winter on account of the general stillness.

As a climber this species is unex-

celled, running up the trunk, descending head foremost, or running along the under side of a branch with equal facility, and a seeming perfect immunity from dizziness.

The Brown Creeper is about five and a quarter inches in length, brown, of numerous shades intermingled, above, and white beneath. The wings are dusky brown, with white bars and spots, the tail rather long with stiff jointed feathers, and the bill is long, slender and curved. So well do the colors of this bird match the bark that it is rendered inconspicuous to a degree, and even on hearing its note of "screeep-screeep-screeep" it is difficult to locate.

The Brown Creeper's favorite method of feeding is to ascend the trunk of a tree pecking out anything in the line of insects which it may find in the crevices of the bark. It seems to prefer elm trees, probably on account of the roughness of their bark. Besides its "screeep" note it has a pleasant little song which may be heard in early spring.

In a future sketch we shall deal with our other common winter birds.



Photo by A. E. Slater, '08.

On the Campus, January 13, 1908.

The Tariff and the Ontario Farmer.

By W. L. SMITH.

“The logic of free trade, it seems to me is unanswerable.”

THIS statement of opinion was made by the late Hon. Wm. Macdougall, one of the clearest thinkers Canada ever produced, and it was made at a time when a long life, which had been almost wholly devoted to public affairs, was nearing a close.

Any man who frees his mind from inherited or developed prejudices, and looks at the matter without regard to the influence which selfish interest sometimes almost unconsciously exerts in the formation of opinion, will find it difficult to formulate reasons for disagreeing with the conclusion to which Mr. Macdougall found himself driven.

Even the most unbending of our protectionists would hardly go the length of erecting artificial barriers for the restraint of trade between neighboring townships. He would not restrict the freedom of interchange between neighboring counties even. Indeed all are ready to recognize the fact that absolutely free intercourse between the several Provinces of Confederation is a good thing. The point at which the objection of protectionists begins is when it is proposed to extend the area of free trade beyond the limits of our own Confederation. But, if it is a good thing to have untrammelled commerce between Ontario and Quebec on the one side, why should it not be equally beneficial to have the same between Ontario and Michigan on the

other? If Quebec is benefitted by the unrestricted flow of trade east and west with Ontario, would she not be equally benefitted by the same absence of limitations on the flow to and from the States of the Union lying to the south? What reason in nature, or what well founded business objection, stands in the way of extending the area of free commerce from the southern boundary of the Dominion to the Gulf of Mexico?

We have found it advantageous in Ontario—farmers and townspeople alike—in more than one season, to draw upon Michigan for the purpose of making up the deficiency in the potato supply of this Province. This year the people of the United States are glad to call on Ontario for the purpose of meeting their deficiency in apples. With the area of free interchange extended over the whole continent the liability to suffering from a famine in one section, or glut in another, would be greatly lessened. With the free trade area so enlarged as to cover the whole civilized world, this danger would be practically obliterated. Under such a system the advantage Ontario now gains by freedom of exchange with all the other Provinces in Canada, would be multiplied by the number of Provinces or States included in this free trade zone.

Let us come to closer grips with this tariff question as it affects the Ontario farmer at the present time. In theory

that tariff is supposed to protect both farmer and manufacturer against foreign competition in the home market. But how does this theory work out in practice? The manufacturer of agricultural implements is protected against American competition by a duty of 17½% on mowers and harvesters, 20% on portable engines, 22½% on scythes, hoes and forks, and 25% on hay loaders, feed cutters and grain crushers. The manufacturer of cotton clothing is protected against British competition by a tariff of 25%, while the manufacturer of woolen clothing has a protection of 30%. If any one is of opinion that this protection does not make the protected articles dearer to the Canadian consumer let him get an up-to-date United States implement catalogue and compare prices; or, better still, let him send to one of the British clothing houses, which occasionally advertise in the *Globe*, for samples and prices. He will find that he can get a London made-to-order suit laid down in Ontario, freight and duty paid, for about the price of a ready-made suit at a Toronto departmental store. There is no doubt that protection does protect the manufacturer—at least that it enables him to sell at unduly high prices, and this is done at the expense of consumers of whom farmers form the major part.

On the other hand to what extent does agricultural protection benefit the Ontario farmer? There is a tax on imported oats of 10 cents per bushel and on barley of 15 cents. When oats in Chicago are higher than they are here the existence of the ten cent tax is as much an injury to the progressive farmer of this Province as would be the re-imposition of the duty on im-

ported corn. Up-to-date Ontario farmers do not sell oats—they feed them. The majority of these buy as a means of supplementing their own crop. In New York State—where some of the best farmers have gone even further along this line—you may find men who do not raise oats at all. They find they can buy these from growers in the Western States at less than it would cost to grow the grain in New York, and the New York dairymen turn this cheap raw material in the form of oats into cheese, milk and butter and make profit on the transaction. Danish farmers—our chief competitors in the English butter and bacon market—also buy oats, oil cake, corn, etc., from the Western States; and, like the New York farmer, they buy duty free, because in Denmark no grain or grain product is subject to tariff exactions. Ontario farmers would be benefitted if, like the farmers of New York and Denmark, they could import all grain from the American west duty free and thus get the benefit of reduced prices when the Chicago market goes below the Ontario level.

There is also a tariff against hogs, cattle and sheep imported into Canada, but to what good? Taking the average of the year these animals bring a higher price in Buffalo than they do here. In the weekly *Sun* of November 6th, top cattle in Toronto markets were quoted at \$5, while in Buffalo the top was \$6.40; in Toronto the highest price for hogs was \$6.25 and in Buffalo it was \$6.60; in Toronto lambs were \$5.40 and in Buffalo \$7.50. Even if the reverse were the case what of it? The surplus both from Canada and the United States would in that case meet in the English market and

that market would determine prices both there and here. So called "agricultural protection," where not an actual injury to the farmer, is not even as plausible a swindle as an ornate certificate of mining stock in a property which is nine-tenths water and one-tenth wind.

A word in closing as to the position of the manufacturer. While the tariff does undoubtedly help him to charge the consumer more than fair market value, it is doubtful if, in the long run, protection is not more of injury than of benefit even in his case. The manufacturer is enabled by the tariff to charge the farmer who uses his output more than fair market price but in many cases articles which to one manufacturer are raw material are the finished product of another and are also protected, and the cost of manufacturing is in this way greater than it should be. Generally, however, an effort is made to unload on the ultimate consumer. In 1905, for example, the duty on dry white lead was jumped from 5 to 30%. This was admittedly done for the purpose of protecting one lone establishment in the city of Montreal, which proposed to manufacture this article. But what was the immediate effect? It was found that this was going to put a burden on paint manufacturers all over Canada to whom dry white lead was a raw material, and so the Government at the same session advanced the protection on the

finished product of the paint manufacturer from 25 to 35%. I have yet to learn of further measures by a paternal Government which will enable the farmer who paints his own barn, or the man whose business is painting other peoples houses, to pass the burden on to someone else. There is always a point beyond which protection cannot go.

But where all manufacturers are injured is in that their energies and attention are turned in the wrong direction. Under a system of Government coddling they are constantly looking to legislation as a means of profit which should be secured by their own efforts, aided by unsurpassed natural advantages. In no country are the natural facilities for the development of manufacturing better than here. We have practically all the known minerals, and in unlimited supply; we have timber in abundance; we have, particularly in Quebec, a more reliable supply of artisans than can be found either in the United States or Great Britain; we have coal, we have natural gas, and we have that cheapest of all sources of energy—electrical power from water falls. With these natural advantages Canada should lead the world in manufacturing. Let our manufacturing friends then use with wisdom and to the full, what Nature has so liberally provided instead of seeking legislation intended to enrich them at the expense of the Canadian Issachar



Voices of the Night.

By REV. THOMAS W. FYLES, D.C.L., F.L.S.

The Rev. Dr. Thomas W. Fyles, D.C.L., F.L.S., Church of England Chaplain to the Immigrants at the Port of Quebec.

For about thirty years Dr. Fyles has been an active member of the Entomological Society of Ontario, and during that long period has regularly attended nearly all the annual meetings held at London and elsewhere, travelling many hundreds of miles on each occasion in order to do so. His many excellent papers read at these meetings have invariably delighted those who heard them, and have added much interest to the annual reports of the Society. He was a member of the Council from 1882 to 1888, delegate to the Royal Society of Canada in 1890, 1894 and 1895, member of the Editing Committee of "The Canadian Entomologist" since 1889, and President of the Society from 1899 to 1901. He has also been President of the Quebec Branch of the Society since its formation, in 1897. A volume of poems by Dr. Fyles has lately been published by Mr. Wm. Briggs, Methodist Book Room, Toronto.

EIGHT years of my early life in Canada were spent in a very beautiful, but comparatively newly settled district, in which there was much of the primeval forest remaining. Some of the first settlers were still living there when I took up my abode in the neighborhood. These men told of the nightly howling of the wolves on the hills when they first began to clear the lower lands, and of their encounters with various wild animals in the woods.

My duties at that time took me frequently from home, and my solitary return journeys were necessarily made at night. Driving on the mountain roads, and through the forest and by the lakes and streams of the locality, I had fine opportunities for studying the "Night Side of Nature"—I use the words in a different sense from that in which Mrs. Crowe used them.

I pity the man, who, living in the country, cannot find at all hours, by day or night, in summer or winter, sights and sounds to interest and instruct him—I pity the man to whom

"The gracious prodigality of Nature
The balm, the bliss, the beauty and
the bloom,"

do not appeal. A solitary drive on a country road has always been to me an occasion for rich enjoyment. The many voices of animate creatures—aye, and by a figure, of inanimate objects also, have formed for me, many a time, a concert well worth listening to.

To speak of the voices of inanimate things—I shall never forget one glorious night when the Aurora Borealis held possession of the sky. From the zenith to the horizon, like the ribs of a vast umbrella, but streaming, quivering, vibrating, the rays descended on every side. I stood, in admiration, and became conscious of a strange sound. Was I mistaken? I listened intently. I could hear the distant fall of the water over the mill-dam—it was distinct from that. It was like the gentle shaking out of a stiff piece of silken goods. It was a sound of which travellers in Arctic regions have told us—it was the voice of the Aurora.

Who is there who has passed through a grove of pine trees in the darkness but has noticed the slumberous sighing of the foliage shaken by the night air? I have often listened to it.

Turning now to the consideration of the notes of animate creatures—what a mournful cry was that of the Loon, or Great Northern Diver, as it passed from one sheet of water to another! It was a weird sound coming from far over head in the stillness of the night, and soon to be answered from near or far by the cry of the companion bird.

Sometimes, in the Spring or the Fall, it was very startling to the lonely traveller in the night to hear a—

“— rush as of harpy wings go by,”

accompanied by a constant trumpeting of “conk-conk.” Looking up, he would see a phalanx of dim forms speeding onward as if to charge an enemy. The sounds came from a flight of wild geese winging their way to or from their breeding-ground in the north.

And these sounds would, perhaps, arouse a fox, who would answer them from the hill-side with his short, sharp bark.

In those days I often heard the rollicking, hearty call of the Great Horned Owl, “Wo-a-ho-a-hoa” shouted from one mountain top, and answered from another by its mate.

Birds of this fine species were numerous in that neighborhood, and sometimes became so bold as to visit farm yards. A farmer on opening his door early one morning, saw a splendid specimen of the kind blinking, and looking very wicked, and fastened to

a large white gander that it had killed. In its efforts to fly off with its prey, it had dug its claws deeper and deeper into its flesh, till it was unable to disentangle them, and, as the gander was too heavy for it to lift, the spoiler became a captive.

A cry less frequently heard, and heard only in the winter, was the dull, heavy “bump-bump” of the Snowy Owl. This bird comes south in the cold weather, but breeds in Arctic regions.

Another sound, that I often paused on my way to listen to, was in those days accounted a mystery. Its cause was not known. I will read to you what Gosse, the Canadian Naturalist, said of it:

“Listen to the singular sound proceeding from yonder cedar swamp. It is like the measured tinkle of a cow-bell, or regular strokes upon a piece of iron quickly repeated. Now it has ceased.”

“F.—There it is again. I will give you all the information I can about it; and that is very little. In spring, that is, during the months of April, May and the former part of June, we frequently hear, after nightfall, the sound you have just heard; from its regularity it is usually thought to resemble the whetting of a saw, and hence the bird from which it proceeds is called the Saw-whetter. I say “the bird,” because though I could never find anyone who had seen it I have little doubt that it is a bird. I have asked Mr. Titian Peale, the venerable Professor Nuttall and other ornithologists of Philadelphia about it, but can obtain no information on the subject of the author of the sound; it seems to be—

“Vox et praeterea nihil.”

"Carver, in his amusing travels, mentions it as being heard near Lake Superior, naming it, if I recollect correctly, the Whetsaw. It may possibly be known, but I find nothing of it in Wilson or Bonaparte. Professor Nuttall was acquainted with the note, but told me plainly the bird was unknown. I conjecture it may be some of the herons or bitterns, or possibly, from a passage in Bonaparte's Ornithology, the Evening Grosbeak (*Fringilla vespertina*). He says of that bird, "Their note is strange and peculiar; and it is only at twilight that they are heard crying in a singular strain. This mournful sound, uttered at such an unusual hour, strikes the traveller's ear, but the bird itself is seldom seen."

The sound is really produced by one of the smallest of the owl family (*Cryptoglaux acadica*). Who it was that first made known the fact I do not know, but it is well established now.

I once saw a pair of these comical little owls perched on the road-side fence, where a small brook crossed the way. I was in my wagon; and the confident, yet inquisitive, looks they gave me were very amusing. Probably if I had attempted to leave the wagon, they would have flown quickly enough. I inferred that they had come to the brook in search of frogs.

Night-jars were plentiful in that part of the country in the summer. After night-fall they would be seen dimly overhead, hawking for moths and beetles. Their rapid movements, as they chased their prey, were not unlike those of the Tumbler Pigeon. And as they flew they uttered their plaintive call.

Once in a long while the scream of

the lynx was heard in the night in that locality as it was in the day time also. A little son of my next neighbor was passing through the woods one day when he was terrified by the cry of this animal. He started to run; and the lynx bounded along—all four feet in the air at once, after the manner of its progression—keeping a short distance on one side, and uttering repeatedly its startling cry, probably to call its mate. Whether the pair would have attacked the child, I cannot say. Happily the sound of a woodman's axe was heard, and this guided the little fellow to safety and frightened the beast away.

In the early spring the Frog Concert came off with great eclat, and was continued night after night. In it were heard the piccolo notes of the Tree Frog, the trombone of the Bull Frog, the cackling, croaking, rattling tattoo of the Common Frog, and now and then, like the jingle of a triangle, the "tr-r-r-ill" of a toad.

There are other sounds that break the stillness of the night—sounds produced by living creatures, but which can only by a figure of speech be termed the voices of the existences from which they come. To use the words of Ben Jonson—

"The scaly beetles with their habergeons"
Do "make a humming murmur as they fly."

Lachnosterna fusca, Frohl, is the beetle that comes from the large white grub that is dug up so often in our gardens. Its shards or elytra are held erect while the true wings which are membranous really bear the insect up, and by their vibrations produce the humming sound.

The impertinent "twang" of the mosquito is produced in like manner; and it is wonderful that wings so delicate and frail in appearance as those of the mosquito can be exercised with such rapidity as to produce so shrill a sound.

The antennae of insects are supposed to serve instead of ears; and it may be that the long and delicate antennae with which many of the smaller kinds of Neuroptera are supplied were intended to catch the pulsations in the air caused by the rapid vibratory action of the minute wings of their compeers. Sounds we cannot hear are in all probability made known to the tiny companions of the creatures that produce them.

The wayfarer in the dusk of evening, who will pause near a patch of the Silk Weed (*Asclepias cornuti*) in full blossom, will probably hear a distinct and continuous humming made by the motion of the wings of the sphinges and other moths, that flit from plant to plant, or hover over the bloom, and through their long and slender trunks, imbibe the nectar that Flora in her bounty has provided for them.

As the summer advances, on nights when the weather is calm, the whole atmosphere seems to palpitate with the multitudinous calls, shrillings, chirrupings and sibillations of various orthopterous insects. The Naturalist with a good ear who will take Scudder for his guide (see "Songs of our Grasshoppers and Crickets," by Samuel H. Scudder, Twenty-third Report, Ent. Soc. of Ont., page 62), and endeavor to distinguish between the notes of the different serenaders will have set himself an interesting task.

Day and night the Naturalist finds

entertainment and food for reflection. It must be said though that the pursuit of Natural History is not always free from danger.

It is the custom, you know, for Entomologists to spread a mixture of molasses and rum upon the bolls of trees at nightfall, to attract Noctuids; and then, at intervals, to visit the baits, carrying a dark lantern and the useful cyanide bottle.

A party of Montreal gentlemen were engaged in this "sugaring"—as it is called—in the outskirts of their city, when the sound of a pistol-shot broke the silence, and the *ping* of a bullet sounded unpleasantly near them. I need hardly say that their sugaring operations were abandoned for that night.

And this story reminds me of an experience of my own, in the long ago, when I was young and enthusiastic.

There was a wood about three miles from the town where I was living, and about the same distance from any other place—it was a lonely wood. I was accustomed to resort to it for entomological researches. It was a grand hunting-ground, and I knew every part of it thoroughly. I was never disturbed nor molested there by anyone. I became very bold, and one night I determined to go there for sugaring purposes. I took a jar of prepared sweets, a dark lantern, and a supply of chip boxes; and I reached the wood about eleven o'clock. I had fairly entered and was preparing for work, when **bang! bang! bang!** broke upon my ear. I was startled, you may well believe; but I understood the position in a moment; there were poachers in the wood shooting the pheasants at roost in the trees; and the men were but a few rods away. I said to myself,

"If these men come upon me they will take me for a game-keeper; and if the game-keepers, hearing the guns, should hasten to the wood and find me here, they will take me for a poacher. In either case I shall fare badly." So I thought discretion the better part of valor, and made for my home as quickly and as quietly as I could.

It may be asked: Of what interest to **Entomologists** are the Loon, the Fox, and the other creatures you have spoken of? To come to an answer you must follow a concatenation such as that which connected the "priest all shaven and shorn" with "the malt that lay in the house that Jack built" and say:

This is the Loon

That swallowed the Frog,

That fed on the Gnats,

That troubled the Folk

That lived in the house that Jack built.

This is the Fox

That killed the Hen,

That ate the Grigs,

That leaped in the Grass

That grew round the house that Jack built.

I remember a conversation that I had with the late Sir William Dawson. We were speaking of the Entomological Society of Ontario. He said: "I see that you have Geological, Ornithological and Botanical Sections of your society. We have regarded the studies that these pursue as of more importance than that which you make your chief consideration—the whole is greater than its part. But your proceedings show how one branch of Science intertwines with others."

I trust then that my reference to animals, birds and reptiles will not have been deemed inappropriate on this occasion.

THE AURORA BOREALIS.

Through one long northern night I sat, O Love!
 Watching swift arrows silently speed forth
 From God's great silver bow bent in the north
 And wondering whither, as they soared above,
 And then methought one ever fondly strove
 To reach a distant star of brighter worth
 Then all the rest that smiled upon the earth;
 At last the messenger the midnight clove,—
 At last, O Love, it laid one long, sweet kiss
 Upon the brow of that awaiting star,
 After vast struggles through the weary night;
 O Love, it is my omen, and such bliss
 Awaiteth still these lips that are afar,
 That yet shall touch thee as their star of light!

—John E. Logan—"Barry Dane."

The Spread of Noxious Weeds in Ontario.

By J. EATON HOWITT, M.S.A.

THE farmers of Ontario are becoming more and more alive to the fact that the terms clean farming and successful farming are almost synonymous. They realize that crops must be kept free from weeds in order to secure the largest returns for the time and labor expended upon them. They realize that weeds are a source of great loss as they increase the amount of labor required for every operation in the cultivation and marketing of a crop. The realization of these facts by the farmers of Ontario has led to the adoption of various systems of cultivation for the control and eradication of weeds. In spite of this, however, it is undoubtedly true that noxious weeds are spreading very rapidly in the Province. This is largely due to two main causes: First, at the present time a large number of new weeds are being introduced into Ontario from the North West and from Europe by various agencies which will be mentioned later; Secondly, that too many farmers have only a limited knowledge of weeds and weed seeds and are hence unable to recognize dangerous impurities in their clover, grass or grain seed, or pernicious weeds when they first appear in their district. It is thus seen that if the spread of noxious weeds is to be checked, steps must be taken to prevent their introduction into the Province and the farmers must keep themselves posted as to the na-

ture of the new weeds which are spreading through it in order that they can recognize and destroy them if they do appear in their district. In this article it is not the writer's intention to suggest measures to prevent the introduction of weeds into Ontario, but simply to mention the means by which they are being introduced and to call attention to a few of the new bad weeds that are gradually spreading over the Province.

How Weeds Are Introduced.

The chief means by which weeds are being introduced at the present time are: First, as impurities in clover, grain, and grass seed. During the past year at least one new weed has been introduced into Ontario from Europe, as an impurity in alfalfa seed, and two other weeds, but little known up to the present time, widely spread throughout the Province as impurities in red clover seed. Secondly, many new weeds are being introduced through the agency of North West screenings and mill feed made from Western grain. Thirdly, railways are a great medium through which weeds are being brought into the Province. Especially is this the case now that our trade with the great North West has become so extensive. Car loads of grain and stock from the West are constantly being unloaded at all our more important stations and grain, litter and fodder containing numerous weed seeds scattered over the tracks. Thus,

it is that we find so many new weeds along the railroads which, if not destroyed, soon spread to neighboring farms. Other agencies active in the introduction of weeds might be mentioned, but the foregoing are probably the most important.

New Weeds.

There are many injurious weeds in Ontario which are but little known. Most of these have but recently been introduced from Europe or the North West and have not yet become very widely disseminated. A few of the worst of these are described below.

Cow Cockle (*Saponaria Vaccaria L.*) This is an annual weed of the Pink family introduced from Southern Europe. It is a troublesome pest in grain fields in Manitoba and the North-western Provinces. This year it was found in several localities in Ontario. It is a



Penny-cress or Stink Weed.—(*Thalpi arvense.*)

smooth, succulent, glaucous plant from one to two and a-half feet high. The flowers are pale pink and about half an inch in diameter. The calyx is conspicuous, being five-ribbed and much inflated and wing angled in fruit. The seeds are spherical, about one-twelfth of an inch in diameter, dull black in color, with minutely roughened surfaces. They are frequently found in scenings from the West.

Field Peppergrass or Cow Cress (*Lepidium Campestre R. Br.*)

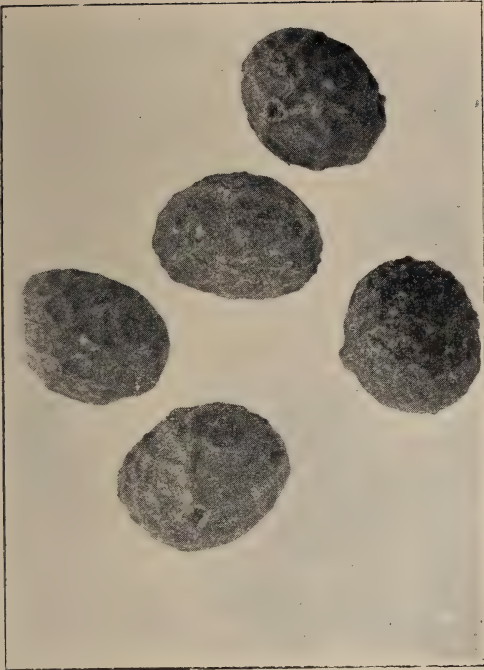
This is a weed introduced from Europe and up to the present time rare in Ontario, occurring only in a few localities. This past season,

however, samples of it have been sent to the Botanical Department from various parts of the Province and it

now appears to be quite widely spread. It is an annual or biennial weed from one to two feet



Great Ragweed—(*Ambrosia trifida.*)



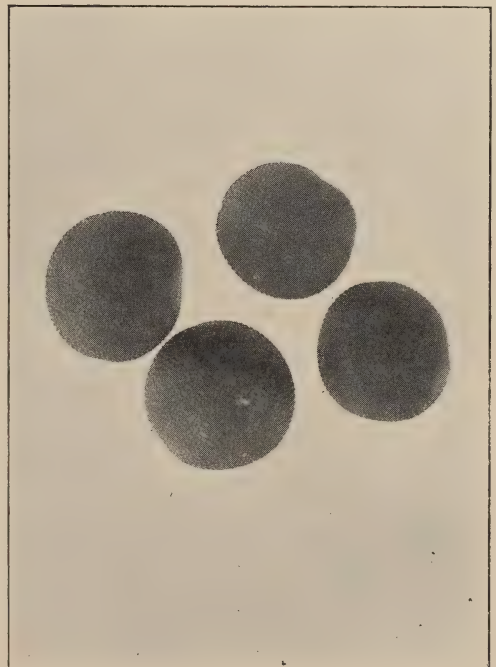
Ball Mustard—Much enlarged.
(*Neslia paniculata*.)

high, freely branching above. The lower leaves are oblong and entire. Those of the stem are spear-shaped, entire or slightly toothed and clasping the stem by their arrow-shaped bases. The seed pods are broadly ovate boat shaped, being rounded below and hollowed out above. They stand out stiffly from the stem on pedicels of about their own length. The seeds are reddish brown in color, one-twelfth of an inch long, sharply egg-shaped, rounded or somewhat flattened, and the surface is granular and somewhat scurfy. This seed is often found as an impurity in clover seed.

Yellow Rocket (*Barbarea Vulgaris* R. Br.) This is another plant which has been reported as a weed from several localities in Ontario during the past year. From the enquiries which we were able to make it appears to

have been spread as an impurity in red clover seed. In many instances correspondents have mistaken it for Charlock. It belongs to the Mustard or Cress Family, but if examined at all closely is easily seen to be very different from Charlock which it resembles only in the color of its flowers. It is not nearly so rough and coarse a plant. The leaves are smooth and shiny, dark green in color and somewhat oval in shape. The lower are petioled and much divided, the terminal division being much larger than the lateral ones. The upper leaves are sessile and slightly clasping. The seeds are somewhat flattened and more or less oblong in form, the two faces being unequally curved. The surface is dull and roughened and the color is light brown. This is an annual weed and is not likely to prove very troublesome.

Ball Mustard (*Neslia Paniculata* L.)



Cow Cockle—(*Vaccaria vaccaria*.)

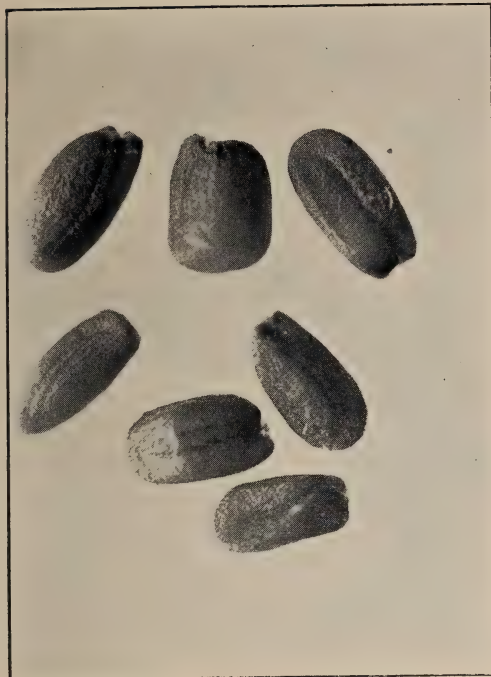
This is a weed troublesome in the grain fields of the North West. In Ontario at the present time it is found only along railways, but there is danger of it spreading to neighboring fields and becoming a pest. It is an erect, slender, strong growing plant with long racemes of small, yellow flowers. The basal leaves are lance-shaped, the stem leaves arrow-shaped and clasping at the base. The seeds are yellow but remain enclosed in the spherical pods which, when ripe, are wrinkled and veiny and about one-tenth of an inch in diameter. They are very inconspicuous objects in seed grain or screenings and are often overlooked.

Tumbling Mustard (*Sisymbrium Altissimum* L.) This is another Western weed which, at the present time, is found abundantly in Ontario only along the railways. It is one of the worst weeds of the prairies of the West where, on account of its tumbling habit, it is spread far and wide by the wind. Tumbling Mustard is an annual or winter annual. It is a freely branching plant and grows from one to three feet high. The basal leaves are oblong-lanceolate, hairy and deeply toothed. The stem leaves are much divided and fall away when the plant ripens. The flowers are small and pale yellow in color. The pods are narrow, about three inches in length and somewhat four-sided, each containing numerous seeds. The seeds are very small being less than one-twentieth of an inch in length. They are light yellow to yellowish green in color and somewhat oval in shape with both surfaces slightly grooved.

Penny Cress; Stink-weed (*Thlaspi Arvense* L.) Though this weed is by

no means new to the Province of Ontario, it is worthy of attention here as it is being widely spread as an impurity in clover seed. Every year it is reported from some new section of the Province. Careful watch should be kept for it as it is a very free seeder and the seeds have great vitality and may remain in the ground for some years. Stink-weed is a winter annual belonging to the Mustard Family. It is considered to be the most troublesome of all the weeds in the grain fields of the West. It is a foul-smelling plant from one to two feet high bearing smooth, dark green, sessile leaves and clusters of small white flowers which develop into orbicular pods. These are flat, notched at the top, and about half an inch broad. The seeds are about one-fourteenth of an inch long, flat, irregularly oval, dark brown to black in color with regularly arranged curved lines on both surfaces.

Great Ragweed (*Ambrosia Trifida* L.) This is a large coarse growing native weed of the Sunflower Family, very common in Manitoba grain fields and now quite frequently found on roadsides in Ontario. It is not, however, likely to ever become a serious pest, being an annual and very conspicuous. It grows from four to eight feet high and bears large, rough, three-lobed leaves. The flowers are monoecious, the staminate ones being borne in long slender spikes at the end of the branches and the pistillate ones sessile in clusters in the axis of the leaves at the base of the spikes. The "seeds" (Akenes) are about one-quarter of an inch long, urn-shaped with a tapering beak around which are arranged six or eight blunt spines. These seeds are very common in wheat screenings from



Tumbling Mustard.
(*Sisymbrium altissimum*.)

the West and are said to be very difficult to separate from the grain owing to their similarity in size and weight to wheat.

Orange Hawkweed (*Hieracium Aurantiacum* L.) This is another weed of the Sunflower Family. It has been common for some time in the eastern part of the Province, and is now gradually spreading westward. It is of European origin and a bad weed, being a low growing perennial, spreading by runners as well as by seed. It is a serious pest when it gets into meadows or pastures as it spreads very rapidly and soon crowds out the grass. It is easily recognized by its bright orange-red flowers borne in corymbose clusters at the top of simple, leafless stems from a foot to eighteen inches high. The leaves are all basal and resemble somewhat the basal leaves of Blue-

weed (*Echium Vulgare*). The seeds are frequently found in clover seed. They are torpedo-shaped about one-twelfth of an inch long and ribbed. Ripe seeds are dull jet black in color, unripe seeds deep red.

Eruca Sativa L.—This is a weed so new that it has not as yet been given a common name. It appeared in Ontario for the first time this year and, judging from the reports concerning it, it is likely to become a serious pest. It is an European weed and was undoubtedly introduced as an impurity in alfalfa seed. At a little distance this weed is easily mistaken for wild mustard, which it resembles closely in habit of growth and color of flowers. It requires only a glance, however, to distinguish it. The leaves are more or less deeply pinnately lobed. The flowers are a lighter yellow and the petals are distinctly veined with purple. The



Orange Hawkweed—Much enlarged.
(*Hieracium aurantiacum*.)

Pods, too, are very different from those of mustard, their upper third being a flat empty beak.

Common Ragweed or Staggerwort (*Senecio Jacobaea L.*) This weed, though probably reported in Ontario before, has never been sent in to the Botanical Department for identification until the past year. It is the weed which has caused so much alarm in Nova Scotia and Prince Edward Island. It is a very dangerous weed as when eaten by cattle, it causes a curious and fatal disease of the liver (hepatic cirrhosis). For this reason a sharp look out should be kept for it in order to destroy it before it becomes established. It is easily recognized being a large, much-branched, strong grow-

ing plant about two or three feet high. The flowers are in numerous heads in corymbose clusters, bright yellow and very showy. The root leaves are six to eight inches long, petioled. Stem leaves sessile and clasping, "all leaves dark green, deeply twice pinnatifid, the segments crowded and overlapping, crisped and wavy."

The object of this article is to call attention to the danger of the introduction of new weeds and to aid those to whom clean farming is an essential to success to distinguish those new weeds which in the future are most likely to become serious pests; for if they are to be prevented from becoming established they must be attacked and destroyed wherever they appear.

THE SHEPHERD OF THE SOIL.

The shepherd of the soil is near to God,
 Because he tends the bounteous Mother Earth;
 His feet are wont to touch the cooling sod;
 He reads the face of Nature from his birth.
 The showers and the sun come in their place
 To aid the work of this fond shepherd's hands.
 The sweet content of life his vision brands
 With peace, that gives his toil an added grace,
 To him is given to see the Bounteous Hand
 In all the gifts the earth so freely gives,
 To him there comes a love for all the land;
 And for God's children that from it must live,
 Let us give reverence to this son of toil,
 For he is God's own shepherd of the soil.

—Myrtle Corcoran Watts.

Anglo-American Musings on Canada.

By "SHEPHERD BOY".

WORDS are somewhat important factors to use in describing the possibilities of Canada, but one runs no hazard in saying that some day she will figure as one of the most important countries of the world. Her agricultural and mineral resources, her religion and politics augur well for this. Should she not experience such a phenomenally rapid growth as the United States has experienced it may be just as well for her. A steady influx of desirable aliens is preferable to a crowded immigration constituted, to an undue extent, of undesirables.

Canada's comparatively slow growth has no doubt been due, in a large measure, to her disinclination to encourage a too-cosmopolitan flood of immigration and to doing things well. Some day this will redound to her credit; in fact, it is doing so now.

The period is fast approaching when the United States will cease to be a heavy exporter of agricultural products, judging by such a rapid growth of her population as 21 per cent. in the decade 1897-1907. Naturally, this period will be postponed somewhat indefinitely (even after most of her available lands have been taken up) by the lessons in intensive farming being taught by her unsurpassed agricultural colleges and experiment stations.

Through her agricultural and mineral resources the United States has

become an immensely wealthy country. What the United States has accomplished will be accomplished by Canada. As previously, but indirectly intimated, some day the United States will cease to do what she has done and still is doing towards appeasing England's huge appetite. Then will the virgin soils of Western Canada yield up their treasure to the British market in exchange for cash that will perhaps make the Dominion second to no other country in wealth. The opportunity for the poor man with little more than his bare hands to acquire fertile tracts of land of respectable acreage is fast gliding away in the United States, and in a short time will be found (in climates congenial to the white man) nowhere outside of Canada, and a few other British dependencies.

There are questions that are incomprehensible to the writer; among them being: Why battleships should be protected by a smooth, easily-penetrated armor in the place of an aggressive type of armor studded with case-hardened, conical projections, which naturally would deflect, weaken or entirely ruin the penetrative force of the shell; why the motive power wasted in applying brakes in bringing heavy trains to a standstill and steadying them in going down steep grades is not utilized in generating electrical power to help the same trains up grade; why wind and wave are not utilized as motive powers to a greater

extent than they are, since there is power enough in them to keep all the machinery on earth running until Tennyson's brook runs dry, when coal and wood get scarce our scientists will turn their attention to these matters; why England, with her great agricultural dependencies, should depend on foreign shores for her bread-stuffs, and why agricultural Canada should be anxious for little England to fatten her feeding cattle, while millions of acres of her grazing lands are lying idle, and cereals and roots grow to such perfection in certain sections, perhaps most sections, of her domain. Were it profitable to feed Canadian cattle in England on her high-priced lands and feeding stuffs, then there should be a profit in feeding Canadian cattle at home. That Canada produces good cattle is simply verified by the fact that Western Canadian steers recently topped the Chicago range market. With her productive soils Canada should some day be able to satisfy England's hungry maw single-handed, for a time at least.

In talking with the average Canadian agriculturist it is easy to glean that he feels he is being unfairly dealt with at the hands of the Home Government, in that the Government does not grant him a preferential tariff. There's some logic in this idea, but England is not the country to tax her people by taxing their necessities of life so long as she has to depend upon foreign countries for those necessities. Her policy is to tax luxuries, not necessities. It is no more than natural to cherish the idea that as soon as Canada or the entire aggregation of British Colonies can produce all that is needed for her subsistence (or what foreign countries are now

furnishing her) that the Mother country will set about ways and means of protecting the commercial interests of the children of her colonies.

To the student of agriculture traveling through the richer agricultural districts of the United States and Canada the one thought is ever in mind: If the sons of British Agricola could only realize what opportunities await them here! But they fail to comprehend what wages and board they can command as against their mere pittance without board at home, and with what ease they could in a short time be their own lord and master of a 160-acre fertile farm in this great land of opportunity. Tinkers and tailors have been successful in this regard, then why not they with the valuable asset of agricultural experience? You may tell them of this but they are profound skeptics. They listen to your story with the same interest that the novel fiend devours his novel, and with the same retrospect, simply emerging from his reverie to find that he has been dealing with fiction instead of the real thing, with the difference that one is justified, while the other is not.

To advise any but the ambitious and determined-to-get-along class to leave the cosy fireside of the neat little homes across the sea would be criminal, for even they may meet disappointment and find the ways of a new country not at all to their liking, no matter with what hospitality they meet. A foreign country, no matter how good, or how beautiful, never gets a fair rating at the hands of a home-sick traveler, for "There's no place like home."

The opportunities to get a good start in life in Canada are so great

that it is but a matter of time before the North West in Canada will become pretty well Americanized, since it is estimated that not less than 300,000 Americans have gone there in the last ten years to engage in farming pursuits. No more desirable citizens can be found since for push and enterprise they are unequalled by any other people on earth. They realize when opportunity comes along and take advantage of it. They know buying cheap lands in a fertile country is a sure road to wealth.

The Canadian agriculturist is sometimes unintentionally unkind and occasionally unjust in his opinion and criticism of the Briton who finds his way to his homestead. He seems to expect him to be perfectly acclimated to the strange ways of a new and strange country. He wonders why he does not immediately adapt himself to the farm, when perhaps less than a month ago he was eeking out a precarious existence as a tinker or what-not in some dingy little alley in the confines of some densely populated British city. Sometimes he is charged with laziness. Lazy bones do not exist in the British workman's body; that of the British hobo is full of them. At times the British workman's reputation suffers at the hands of some disreputable scion of "noble family" who has been ostracised from home, who was never any good there or anywhere else, and never will on this side of the Great Divide, whatever use he may be put to after he crosses that dim-distant line of demarcation. But, withal, ample proof and a living monument of the frugality, industry and enterprise of the British toiler is found in fair Ontario, an agricultural region which for average is second to

none. Her stock is eagerly sought by American breeders of pure-bred stock. Her fruit is unsurpassed by any growing in similar latitudes. There is scarcely any plant or animal life peculiar to such latitudes as hers which does not flourish to perfection within her borders. Her agriculturists are flourishing. The numerous fine new residences and capacious barns are proof of this. Her farm has produced many great men—James B. Hill is a worthy sample, and Sir Wilfrid Laurier, is as good or better—is producing great men and is destined to produce men who will rank among the world's greatest leaders.

Canada is naturally adapted for stock raising and the fertility of her soil should be conserved by stock raising as much as possible, for no matter how fertile a country may be, a continual drain upon her fertility will ultimately sap her vitality. Notwithstanding that Canada is an ideal sheep-raising country, sheep-raising is a comparatively neglected industry with her. True, she raises some good sheep, but not nearly enough of them. She could raise more than double the number of purebreds she is raising and find a ready sale for them in the United States. Why this neglect of opportunity? There are many reasons advanced for it, among them being the dog nuisance. This should be abated by rigorous legislation. What about sheep in the West? I am advised by an eastern sheep authority who has gone well over the ground that the conditions in some parts of Western Canada are ideal for sheep raising. Why not give immediate attention toward developing them?

A factor that will create inestimable wealth to Canada is the proper

conservation of her forests. A lesson that should prove a warning against the sacrilegious destruction of valuable timber, such as was once in evidence in the United States, and perhaps, Canada, may be drawn from the fact that the hardwood supply of the United States is 15.3 per cent. less than in 1899, while the price has advanced from 25 to 65 per cent. In these figures is found a not very thinly veiled prophecy of a serious and not distant timber famine in the United States and an injunction to Canada to sacredly guard her timber resources, even to the smallest stick of kindling wood. Little sympathy should follow the sufferings of a nation which through wanton waste of her natural resources ultimately feels the pinch of want.

Canada is well equipped with agricultural colleges and no better illustration of the degree of success attending their work is available than that offered by the number of graduates who fill professorships and other positions in the agricultural colleges, experiment stations and stock farms of the United States. It must not be inferred by this that Canadian agricultural colleges or Canadian agriculturists are better than American colleges or American agriculturists; at least your scribe is not ready to concede that they are, for some of the best institutions of the kind that he has ever visited, and some of the best stock farms he has ever

seen are in the United States, and some of the poorest farms he has ever seen were "made in Canada," but withal perhaps the best average farms on this continent are found in Canada. But, odious comparison aside.

The farmer of the future must be a scientist, and the time is fast approaching when he who gathers up his fortune in the middle of the field will have to hunt around the fence corners for it, and it remains with the agricultural college to show him how to find it.

To my Anglo-American mind comes the vivid thought: Is not the Canadian farmer's wife somewhat overworked? Of her own free will, of course. Does she indulge in sufficient recreation? Does she get out of life what her Creator intended she should? Is not her neat, well-kept, hospitable home sustained at a serious sacrifice of health, partly on account of the hired-help problem, and partly on account of the desire to "get along?" Ambition is among one's grandest possessions; hugging the desire to acquire a competency for old age is an alluring and often delusive fascination, but acquiring a competency at the expense of health, especially where the sacrifice of the health of God's most noble creation is concerned, is criminal to a degree. A woman bent with work rather than age is pitiable to behold and should be an impossibility in civilized countries.



Government Cow-Testing Associations.

THE Department of Agriculture of Canada has, during the past year, under the direction of Mr. J. A. Ruddick, Dairy and Cold Storage Commissioner, Ottawa, established Cow-Testing Associations in various parts of Ontario. The object of these associations is to assist the members in improving their dairy herds by showing them the amount of butterfat each cow in the herd has produced throughout the year.

During the past season all expense of the work was borne by the Government, but in future the members will be asked to contribute a small fraction (about one-eighth) of the actual cost of doing the testing. The amount to be asked will be twenty cents per cow per year, for herds of five cows or over, and for herds of under five cows. a minimum charge of \$1.00 per herd will be made. In all other countries where the work of cow-testing has been carried on the members of the associations have borne the greater share of the cost, so the members of these Canadian associations should have no objection to paying the small portion of the expense that they are asked to contribute.

Apart from the expense of the testing, the members have to procure the necessary materials for taking the test. The outfit, which is obtained from the Government at the cost of about \$3.00, consists of a spring balance, a box containing small bottles, one for each cow in the herd, and a small dipper for taking the samples. On each bottle is

marked the number of the dairy and the number of the cow. Preservatives for the milk and record sheets for keeping the weights of the milk are supplied monthly by the Government. On these record sheets are spaces for filling out the name and number of cow, breed, age, date of last calf and the weight of the milk, morning and evening, for three days each month.

When a sufficient number of farmers, from ten to twenty, are willing to take up the work of cow-testing, an association is established. The sampling and weighing is done three times a month, at equidistant dates, as, on the 6th, 16th, and 26th, and on the 27th the samples and record sheets are sent to the local creamery or cheese-factory. Here the samples are tested by a competent Government official, the quantity of milk and butterfat given by each cow during the month is estimated and a monthly report is sent to each member. This gives him the estimated weight of milk given by each cow in the herd, the per cent. of butterfat in the milk, and the total yield of butterfat to date. The bottles are washed, preservative is put in them and they are returned before the first testing-day of the following month.

Somewhat later in the month there is sent to all the members of the association a report, giving them the standing of each member's herd as regards average in milk and butterfat, highest individual milk yield and its test, and lowest individual milk yield and test.

Some people have said that the amount of time lost in taking weights and samples makes it impracticable for the use of the average farmer. But let such people consider that one test, including weighing, recording and sampling, can easily be taken in thirty seconds per cow. With six such tests a month during the ten months a year that a cow should be milking, the time per cow would amount to thirty minutes, half an hour. Surely this is not too much time to spend over a cow in one year, to find out whether or not she is profitable to keep.

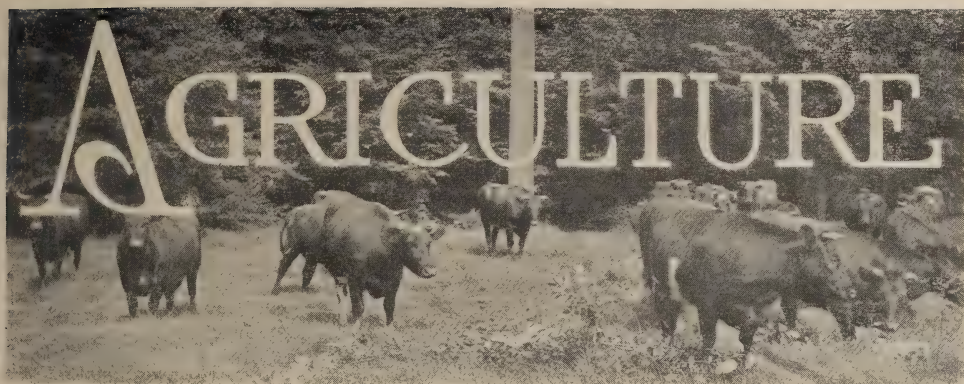
The need of such associations is plainly shown in the fact that the average yield of milk, for the thirty days ending October 26th, 1907, from the 65 cows of the nine herds in the association at Gamebridge, Ont., was only 419 pounds, and the yield of butterfat for the same period was 15.4 pounds. Taking it for granted that the cows would give the same amount of milk in each of the ten months of the milking period, which would amount to 4,190 pounds of milk each, we find that the average falls much lower than the 6,000 pounds of milk a year which we are taught that a cow should give before being allowed a place in the herd.

The benefit of the knowledge gained, to the members of the associations,

can well be imagined. It enables each farmer to tell just how many of his cows are earning him money, and how many are eating more than they are worth. The owner is then able, by selection and careful breeding, to build up a herd, each individual of which will bring him a good profit. Of course, this can be done if the dairyman owned a Babcock testing outfit and did his own testing, but in these Government associations the farmer may be confident that the work is done by a responsible person, while in the private testing there may be many mistakes if the work is undertaken by an incompetent person. Further, and of much greater importance, is the fact that the farmer can compare the yields of his herd with those of his neighbor's, consequently he can easily tell just where his herd stands in relation to those around him. This will create a feeling of friendly rivalry, with each farmer striving to have his herd make the best monthly and yearly showing. A condition like this should have much to do towards improving the dairy industry in that particular locality, and as these associations are scattered over many parts of the country, the dairy industry of the Dominion cannot help but be greatly benefitted by them.

F. B. Warren. '08.





Ontario and the West

“Go West Young Man”

F. B. LINFIELD

THE above advice has often been given coming down through the years of the country's history; and it seems to have yet lost none of its force. should we judge from the number of people streaming into the south-west, the west and the north-west of the United States and Canada.

The young, the vigorous, the enterprising, looking for new fields to conquer, are pulling out from the old home to build a new civilization in the West. Is it any wonder with such a class of workers, the western country should grow, develop and blossom? There is room for many more, but at this time I wish to say a word for the old home.

For fourteen years I have lived in this western country and have trodden the soil of every state west of the Missouri River, except New Mexico Oklahoma and Texas. I feel as though I knew this western country. A year ago (November and December), I took a trip east, taking a southern route going, and returned by a northern route.

A day-light ride northward through Pennsylvania and New York to Buffalo, showed some beautiful homelike rural scenes.

Crossing at Niagara Falls, I brought me of a beautiful drive along the banks of this river taken some fifteen years before with a travelling dairy. On to Guelph with familiar scenes here and there by the way. Here a few days were spent, visiting places where six years were employed in absorbing some information and much enthusiasm from the big men shaping and directing the work of the O. A. C. On to Goderich near which was the old home, where the youth grew into manhood; where ambition stirred and started the man toward a fuller understanding of the only life work that appeared to offer,—the farm.

As I looked around, it would seem that the people only had changed,—time had taken his toll—the country had changed not at all. Here was a country made,—made by a vigorous,

virile race; with homes commodious and substantial, and surrounded with trees, and orchards, and barns and the many conveniences that make for ease of work and enjoyment of life. With a social community of strong, whole-souled, independent men and women; with schools and churches, which are such large factors in the educational and moral upbuilding of the community easily accessible to all; with a civilization not perfect but capable of growth, towards larger, better and higher things.

And yet I was told that nearly ten per cent. of the population of Huron County had left for the West during the past year and other counties had parted with as great a number. Many had left comfortable homes amid a most enjoyable social environment to become a pioneer in the West,—why? It seems to me they failed to appreciate what they have at home. Are they looking for cheap land? I visited farms within five miles of Goderich that could be purchased for from \$4,000 to \$4,500 for 100 acres, with a fine home, with orchard and barns and fences, all in good shape. The improvements alone could not be reproduced for \$2,500.00.

I am reminded of a contrast in this western country where \$10,000 was paid for 100 acres of land, fifteen acres of which was brush land; without a house or barn or orchard or fence, except a cheap barb wire fence around the outside. This was an irrigated farm, but even so I cannot think it was worth five times the value of the Ontario farm without the improvements; and then when I contrasted the social and educational advantages and conveniences, much was to be said in favor of the Ontario farm.

It is true that cheap land may be had in the West. A year ago the past summer, I drove out some twenty-five miles north from the Great Northern Railroad from a town about sixty miles from the N. Dakota line and about the same distance from the Canadian border. Two years before, this was exclusively a range country with scarcely a habitation. During that and the previous summer, 700 to 1,000 homestead filings had been made in this country, extending out 50 to 60 miles from the railroad.

It was a rolling plains country, semi-arid with about 16 inches of annual rainfall, not a tree in sight except along the river some four to eight miles away. Into this country men had come with their families. According to their means they had built from a one to a five or six-roomed house, also a small stable supplemented in some cases by a larger one built of sod. Neighbors were distant; roads, schools and churches, all had to be built from the foundation. The garden and orchard with trees and shrubs and home-like surroundings all had to be created while the years went by; this is pioneering.

A couple of months ago, I took a drive of 45 to 50 miles north of the Northern Pacific Railway to the country between the Yellowstone and the Missouri Rivers, in the eastern part of this State. We stopped for the night at a ranch home, located on a side hill close to a small stream. The country around was hilly, broken and rough. A few scattering trees were along the stream, not another house was in sight. The nearest neighbor was two to three miles away, but the country was too rough to see them. The house was of logs well put together, one story; the

roof covered with earth, which is cheap and in a dry country sheds the rain and in a cold country holds in the heat. Within the home was roomy (five or six rooms) and cozy. Here a woman's hand was in control. It was everywhere apparent; a woman of education and refinement, who had left the old home in Michigan to share life's success or failures with a young man on the frontier.

These people will succeed but it means hard work, while denying themselves and their families much in the way of educational and social opportunities.

I am fully persuaded that there are many places in Ontario where the young man or woman who will work as hard as they **must** work in the west to succeed, can, and will do just as well and even better at home than they will do in the West, and without asking their families to sacrifice much of comfort, and of social and educational advantages.

While in Ontario I talked with a young man who a few years ago bought a hundred acres of land. During the previous year he had paid interest on a mortgage of \$3,000.00 at 5% interest. (he would have had to pay 8% to 10% in the West), and had also paid off \$500.00 on the mortgage. He did not have to work as hard or deny himself many pleasures unattainable in the West. He had lived well and yet very few in the West had done any better.

Again, another thought, Ontario was the cradle where was nursed Anglo-Saxon civilization in Canada; the center from which it has spread on to the north and west. It would be sad to think that it may in the future

pass into the hands of an alien race, repeating here the story of many districts in the New England states of America; where the emigrant, foreign in type, in manners and in language has taken possession of the land of the fathers.

When the young people desert the old homes, it is not long before the old people must leave,—they have lived their time here and pass on,—and there is no person to carry on the work they have laid down. The farm and home, large numbers of them go on the market and soon the lack of demand reduces them to a price that makes them attractive to the thrifty foreigner. The start once made, it is only a few years when the increase in this element destroys the desirability of the locality for the old inhabitants who are used to a higher type of civilization and the change to other hands is accelerated. I do not say this is a probability in Ontario, but I believe it is a possibility and something well worth thinking about by the leaders of education and thought in the country.

I would not say to the young people of Ontario do not go West. Those who can only look forward to life as a worker in the shop or factory or store, I would urge to go, that they may grow and develop with the larger life of the West. But the young farmers I would ask to look around and see what the old home has to offer, and to bend their best endeavors towards enabling the people and themselves to enjoy a larger, a better, more profitable and more enjoyable outlook on the life which the farm home in Ontario has to offer if they will only set to work and dig it out.

Some Phases of Mutton Production.

Because of the increasing demand for mutton and the curious parallel fact that its production is decreasing, there is good reason for thinking more seriously of the sheep husbandry problems. While it is true that the total production has been on the decrease, yet it is encouraging to know that the proportion of the superior quality of mutton compared with the inferior quality is on the increase.

The increase in demand is due to several causes, the chief of which are: Mutton is better fattened and prepared than formerly; a very much greater supply of lamb mutton is offered than of mutton from older sheep; and fashion demands mutton in greater supply than before. Sheep feeders, recognizing these facts, are beginning to realize the necessity of producing mutton to suit the market demands. In endeavoring to suit the market demands they know that young stock is preferred, and so many lambs are disposed of instead of being fed over as formerly.

The decrease in production is due firstly to the comparative high prices for other kinds of stock, particularly dairy stock, for which there has been a great demand on account of the profitableness of the dairy industry, especially the last few years; secondly to the lack of pasture, particularly in the localities where the sheep were formerly pastured on the road a large part of the grazing season, a privilege which has since been denied the farmers in these localities; and thirdly to the losses sustained from dogs. Nothing, however, need here be said about this, as the majority of sheep

breeders have had some experience in dealing with the vicious curs.

The chief trouble in prime mutton production has been the scarcity of stock sheep, both ewes and sires, but particularly sires, that have sufficient merit to reach the standard of excellence for a strictly prime carcass. Although the procuring of sheep of superior breeding and constitutional vigor is essential, more than this must be done to make a profitable sheep. It is no less important that the sheep should receive proper care at the hands of the feeder. Under proper care development will take place as rapidly as possible, with the least possible waste.

To produce the largest amount of valuable meat for a given quantity of food with the smallest amount of waste to the consumer should be the aim of every sheep feeder. To realize the largest profits in sheep-feeding it has been found advantageous to finish at an early age, because with older sheep a larger amount of feed is required in proportion to the increase in live weight. The most influential factors in determining the profits are—the feeding value of different foods and their cost and the time occupied in fattening and marketing the sheep. Hence the advantage of finishing at an early age. The greatest and most profitable gain is made in the younger days of the lamb, and the feeding of such food as bran, oats and linseed meal before and after weaning pays in direct profit, whether the lambs are being fed for early market, for the fall market, or for a later market. Early maturity is one of the most profitable features in grain-fed lambs.

M. A. Jull, '08.



The Economic Importance of Canadian Horticulture.

By A. W. PEART.

IT is estimated that seventy-five to eighty millions of dollars are invested in the industry of fruit-growing in the Dominion of Canada to-day, and fifty-five to sixty millions in the Province of Ontario.

The annual value of fruits of the Dominion is calculated to be ten to twelve millions, while in Ontario the figures will probably stand at from seven to eight millions.

Some conception of the growth of the industry in Canada may be formed by comparing the quantities of the various fruits as shown in the Dominion census of 1891 and 1901 respectively:

Canada—Quantities of Fruit.

	1891.	1901.
	*Bushels.	Bushels.
Apples	7,563,894	18,626,186
Peaches	43,690	545,415
Pears	229,283	531,837
Plums	269,631	557,875
Cherries	197,090	336,751
Other tree fruits.	324,789	70 396

	Pounds.	Pounds.
Grapes	12,252,331	24,302,634
		Quarts.

Small fruits . . . Not given. 21,707,791
 *The number of fruit trees was not taken in the census of 1891.

These figures show that there was a very marked advance during the decade. the gross quantity having more than doubled. In peaches the increase was phenomenal. The diminished quantity under "Other tree fruits" as shown in 1901, may possibly be accounted for by a greater specialization, and a different system of computing the figures.

During the five years, 1900 to 1904 inclusive, progress seems to have been slower. In the Province of Ontario, orchards, gardens and vineyards increased only 10 per cent. This may be easily explained. Owing to over-production along certain lines, notably currants, gooseberries and plums, prices scarcely left a margin of profit; the fruit grower was discouraged. plantations were neglected, few young

trees were set out, and the industry became depressed.

During recent years, however, a revival has taken place, better prices have prevailed, the ever increasing consumption of canning factories being a potent factor in maintaining an equilibrium of values, and to-day the fruit grower is hopeful.

We consider that fruit growing interests have sometimes in the past been injured by injudicious booming. Stories of fabulous profits have caught the unwary and inexperienced. Capital is attracted, more trees are planted out, and the result is more fruit than the markets can profitably absorb.

As a matter of fact there is a fair margin of profit in growing fruit, as there also is in producing vegetables, hogs, beef, butter or cheese, but in order to secure this margin a man must adopt those conditions of his special line, which make for success. He must be honest, practical, energetic, thorough, resourceful and possess business instinct—in short, he should be prepared to lead the strenuous life. Under these requisites there is perhaps no branch of agriculture of a higher or more attractive type. The future of growing fruit will be a development from its past, and will depend in no small degree upon the character of the men engaged in it at the present time. Among the problems facing the grower are those of combatting injurious insects and fungi, co-operation, cold storage, transportation and markets.

There is very little data available upon which one may base an opinion as to the extent and value of the vegetable industry of Canada.

An attempt, however, is here made to present a few figures, which, imperfect though they may be, may

serve as a stimulus for further research.

*The Vegetable Industry—Canada.

Acres—	1891.	
	Value of Product.	Capital Invested.
69 426	\$3,124,170	\$13,885,200
	1901.	
105,664	\$4,758,400	\$21,132,800
	1907.	
184,912	\$8,327,200	\$36,982 400
	Ontario.	
	1891.	
26,733	\$1,202,985	\$5,346,600
	1901.	
40 100	\$1,804,509	\$8,020,000
	1907.	
70,175	\$3,157,890	\$14,035,000

*These estimates do not include turnips, man-golds, potatoes, nor field crops generally, but embrace tomatoes, melons, cabbage, onions and all vegetables widely known as garden truck.

In the Canadian census of 1891 and 1901 the acreage of vegetables and small fruits is combined. The former gives 77,140 acres, and the latter 116,517.

The value of fruits and vegetables in 1901 is also combined, the amount being placed at \$12,994,900 for Canada and \$7,809,084 for the Province of Ontario.

At the Ottawa conference of fruit growers in 1906, the writer estimated that in 1901 there were 10,853 acres of small fruits in bearing in Canada, and 8,116 acres in Ontario.

If we deduct the small-fruit acreage from that of small fruits and vegetables together, there is a balance of 105,664 acres. By a similar process the vegetable acreage of Ontario is estimated, viz., 40,000.

The value of Canadian fruits in 1901 was placed at \$8,236,500. Deduct this

from the fruit and vegetable values combined (\$12,904,000) and there is a balance of \$4,758,400 for vegetables. In like manner the value for Ontario is obtained.

The acreage for 1891 is reached by assuming that the proportion between vegetables and small fruits remained nearly constant during the ten years (1891-1901), which, in vegetables would mean a ratio of about 2 to 3.

In order to estimate the invested capital, vegetable lands are valued at two hundred dollars per acre. In round numbers it is calculated that during the past seven years the vegetable acreage in Canada and Ontario has increased about 75 per cent.

We are informed that in the Dominion of Canada there are nearly eighty vegetable canning factories, while in Ontario the number is said to approach sixty. Several of these have been built since 1900, so that the factories are increasingly absorbing large quantities of tomatoes and other vegetables. In addition to this the demand for domestic purposes is a rapidly growing factor.

Probably the value of the tomato product alone, in its raw state, amounts to over a million dollars per annum in the Province of Ontario. In addition to this crop there are grown large quantities of melons, cucumbers, cabbage, cauliflowers, onions, beets, early potatoes, squash, pumpkins, canning corn, peas and beans, etc., and what is generally known as garden truck. The acreage of all these is extending year after year.

The canning companies and the fruit and vegetable growers have large mutual interests. The former purchase the surplus products of the latter and thus give the general market a greater stability.

In regard to the industry of floriculture there are no figures or data at hand from which deductions might be made. There is no doubt, however, that, as the material wealth of the people increases this branch of horticulture will expand commensurately with the growing leisure, education and refinement.

How often we hear the expression that horticulture is still in its infancy. Well, according to the figures submitted above, the child is apparently growing very fairly, and is in a healthy condition. Speaking in a relative sense however, there is no doubt but that the industry is still a comparative infant. In every Province there is room for an indefinite expansion. Each of the provinces possesses a soil and climate suitable for the development of a type or types of the highest perfection. The favorable environments of a given fruit may be limited to a district where it finds itself perfectly at home, while another fruit will succeed best in another quarter of the Dominion.

Our geographical situation gives Canadian fruit that quality for which it is noted and sought in foreign markets. It has become almost an axiom that the farther north any product can be successfully matured, the higher the quality.

Greenhouse Tomatoes.

By A. McMEANS.

The constantly increasing growth of population of the cities and large towns of Ontario offers an ever-increasing market for forced vegetables. Among the forced vegetables, I know of no one which tests the skill of the grower as does the tomato. It is naturally a sun-loving plant, and during the short and cloudy days of winter it offers so many difficult problems that very few growers make a financial success of growing winter tomatoes.

Thinking it may interest a few of the many thousands who saw the crop of tomatoes in the greenhouse at the College last June, I shall give a summary of the methods used and the results derived therefrom.

Both variety and cultural tests were conducted. In the test of some seventeen different varieties, the yield varied from an average of eleven pounds per plant on Lister's Prolific and AI, down to five pounds thirteen ounces per plant on Magnus.

In the test of sub-irrigated versus surface watered beds, the results varied greatly, Lister's Prolific giving a gain of 55% in favor of sub-irrigation, while Faultless Early gave a loss of five per cent.; but taking a total of the seventeen varieties we find a gain of fourteen per cent. in favor of sub-irrigation.

In growing the plants at different distances apart, we secured an increased yield per square foot of bench room by planting one foot apart each way; but, at the same time, the average weight of fruits was only three ounces each, whereas planting two feet apart each way gave a higher average weight of individual fruits of 4.2 ounces each,



Photo by A. E. Slater, '08.
FIG. I.

and the yield per square foot of bench room decreased by thirty per cent.

In training to two stems versus one stem we find a decrease in the average weight of individual fruits to 3.7 ounces each, and an increased yield per square foot of bench space of about eighteen per cent. on the two-stem plants.

Sub-irrigation seems to be advisable for the growing of greenhouse tomatoes. By the use of ground beds the method is not expensive. It involves the laying of a cement bottom with a fall of about one inch in fifty feet, and the use of one or more lines of two and a half inch ordinary drain tile laid lengthwise of the bed before the soil is put in. The lines of tile need not be closer than three feet. The advantages are an increased yield and less rot. There is also time saved in watering, as the hose can be inserted in the tile at the high end with the water running and can be left some time without attention.

Surface watering tends to pack the soil and form a crust on the surface. In sub-irrigation the capillarity of the soil brings the water to the surface, which is left open and friable. Mulching with strawy manure is the nearest approach to sub-irrigation.

The temperature of the house should be about 60° Fahrenheit at night and the day temperature may be run 10° higher by artificial heat. The sun temperature may be allowed to run to 90° or more, but it is always advisable to ventilate when it reaches 65° or 70°. No shading of the glass is necessary.

Tomatoes forced under glass are inclined to grow more irregular than when grown in the field. It is always advisable to select those varieties which naturally grow smooth and even. Some varieties set fruit right to



Photo by A. E. Slater, '08.
FIG. II.

the top of the plant as in Fig. 1, while others seem to have spent all their energy in producing three or four clusters of fruit, as in Fig. 2.

Fig. 1 is a good illustration of a tomato plant approaching the ideal—smooth, even fruits, averaging from

be allowed to grow to form the second stem and other suckers or branches should be kept pinched off.

Hand-pollination is necessary for the successful growing of greenhouse tomatoes. A dry atmosphere facilitates pollination.

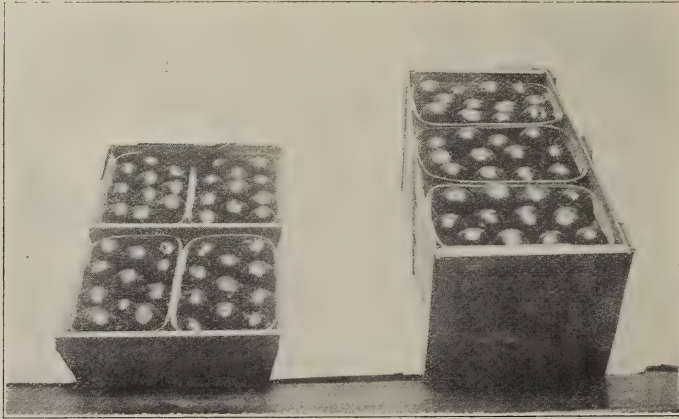


Photo by A. E. Stater, '08.

three to six ounces each and loaded right to the top of the plant (several pounds of the fruit at the bottom of the plant having been picked). In comparing Fig. 2 (photo taken at same time), notice the few fruits, large and rough, which when sent to market would not be attractive enough to tempt the buyer.

In training plants to one stem all side branches or laterals must be kept pinched off. When training to two stems, the lowest strong branch should

detract from the appearance and price of the fruits which are first class. Should you be close to market, five or ten pound baskets will be found the handiest. If it is necessary to ship, it will be found advisable to use either one of the packages in the photograph. Texas growers have adopted the one to the left, with the single tier holding four baskets, and the Florida growers use the carrier holding two tiers of three baskets each.

White Fly or Plant House Aleyrodes is the most troublesome of the pests. It can be controlled by the use of Hydrocyanic Acid Gas.

In marketing it will be found advisable to grade the fruit, separating and marketing in two grades, No. 1 and No. 2. If sent to market ungraded the poorer fruit serves only to



The O. A. C. Review

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Editorial.

In view of recent events it would be unkind to say that the work done by this College in stock-judging is not of a highly satisfactory nature, yet, notwithstanding the extremely sound basis on which this department of our work rests we must continue to strive to greater attainments. A step in advance would be to establish stock-judging contests among the students. In many United States Colleges large sums of money are awarded in prizes to students in such competitions. Their value will be apparent to all. In growing colleges where the demands for money are great it is not easy to obtain all the funds that could be wisely expended. Although the incentive would be much greater if substantial prizes were given, yet, we feel that strong interest would be taken by the student

Judging Contests

body if contests were methodically and regularly conducted, even if there were no other reward than the education to be obtained therefrom. For after all the intrinsic value of medals won in competition, is not the standard by which we measure the value of competition, but rather is that standard the training derived from the competition. May judging-contests soon be a regular feature of our College work.

A recent addition to our already numerous organizations deserves more than a passing notice from the Review. We refer to the Camera Club. Though it was formed only two months ago, there is already a spacious and well-equipped dark-room provided and a great interest in photography aroused. The dark-room has six stalls

The Camera Club.

for developing plates and films, fitted in modern fashion, with electric ruby lights, racked sinks, etc. The printing room has about 16 feet of sinks, and lockers for students. It is hoped to procure an enlarging camera, with a mercury vapor light, at some future date. Mr. E. Zavitz, the president, and one of the best amateur photographers in Canada, deserves much credit for the energetic way he has pushed the club's interests. The local representative of the Canadian Kodak Co., Mr. Petrie, has donated generous prizes to O. A. C. and Macdonald Institute students for photographs. The Review is pleased to welcome so valuable an ally to the college paper.

At different times during the history of this College have substantial donations been made to it. The interest taken by many of its supporters and sympathisers is a keen one and we appreciate it. The latest manifestation of good will is shown by the action of the Massey-Harris Co., Limited. Since our last issue, this old and long established firm has placed in the Mechanical Building of this College a complete set of all the farm implements which they manufacture. These have been set up and will be used in connection with the lectures to the students in Farm Mechanics. The donating of this machinery to the College at no inconsiderable cost means more than the kind interest which the donors take in the College. It means that the managers of this company feel that in thus bringing their goods before the students and visitors of this institution they are placing them before the notice and under the criticism

Another Donation.

of Ontario's shrewdest Agriculturists and they covet this notice and this criticism. In short, it means that our manufacturers have come to a realization of the fact that the Ontario Agricultural College can no longer be disregarded and that it must hereafter be reckoned as a most potent factor in the progress of Canadian Agriculture.

As is stated elsewhere in this issue, the Public Speaking Contest this year was a pronounced success. This is especially gratifying to all who are interested in the training given at this College in public speaking.

The Public Speaking Contest.

During the past few years some radical changes have been made in the method of conducting this contest. Until about three years ago the Public Speaking was held one week after the Oratorical contest and although it was not intended that it should be so, yet it often happened that men, who were unable to be one of the number who were permitted to compete in the Oratorical, were the men who took part in the Public Speaking. Two years ago an attempt was made to make the two of equal importance by changing the standard used in determining the best speech and thus encouraging two widely different types of public speaking as the names really imply, the one an oration and the other a speech such as would be delivered at a Farmers' Institute Meeting. The attempt proved successful and men soon found on close examination of their natural style of speaking that they were unmistakably either in one class or the other. The committee

in charge this year decided on another innovation. It was this. When each man had finished his speech the audience were given five minutes to ask any questions they wished having a bearing on the subject discussed. As many Short Course students were in attendance the questions, which were numerous, were asked by men who were complete strangers. The method of handling these questions showed two things, the speaker's knowledge of his subject when lead away from his set speech and also his ability to think and talk at the same time. The innovation has proven a decided success.

We feel safe in saying that the hours during which the students have access to the Library and Reading Room are not satisfactory.

The Library Hours. Where in Canada

can we find a college library that is closed to the students every evening and an hour and a half each day at noon? Our Library opens as we go to class in the morning and closes as we are dismissed at noon. It opens again at half-past one, as we go to class in the afternoon, and closes very shortly after we get through work, and if we happen to be detained slightly longer than usual we have practically no time at all in which to do our prescribed reading. The reading now required to be done by the Second, Third, and Fourth Year amounts to a good deal and cannot be done in the short intervals at their disposal. This reading is to a

great extent found on the reference shelves and cannot be taken from the room. Therefore it is necessary to spend a considerable amount of time in the Reading Room if we are going to do our reading in anything like a systematic manner. We would suggest that the Library be kept open during the noon-hour and from seven to half-past ten in the evening. This would afford an opportunity from 12.30 to 1.30 to change books and for nearly an hour's reading. Then in the evening after study hour those who have reading to do could resort to the Library for an hour or so. If this suggestion is carried out it will, we believe, enhance the efficiency of the Library and enable the students to use it much more extensively than at present.

We take this opportunity to announce that the Loudon Machinery Company are generously

The Loudon Prize. offering a cash prize of twenty dollars for the best drawn-plan of a barn, to

be handed in before the close of the present term. This competition is open to the students of the Second Year and the only stipulation concerning it is, that the plan shall not be of a large or elaborate nature but one of a barn to hold say twenty cattle and six horses. This is a prize worth trying for and to those who do not win the prize, the experience is worth the effort.



COLLEGE LIFE

Home Life at the O. A. C. and the Opportunity it Affords.

THE Ontario Agricultural College is the largest residential educational institution in Canada; by this statement I mean that the O. A. C. has more students in residence than has any other college in the country.

Although a few of the students who come here have had some previous experience of college life, yet to the majority of the freshmen, life in a college residence is something entirely new. Perhaps these students formed more or less accurate conceptions of just what the home life here would be, and of just what it would entail. Some may have looked forward eagerly to the life here; some may have regarded it indifferently, but I venture to say very few freshmen have ever thought that in coming to this institution they are being presented through the home life here with a golden opportunity to inculcate those principles and virtues

which strengthen character and which lay the foundation of a successful life.

It seems to me that after a few weeks' residence the new student cannot but feel that his most sanguine expectations have been more than realized. We have here almost everything that goes to make up absolute comfort, and absolute comfort goes a long way towards happiness. True it is that we do not dine like the Roman Emperors of Old, nor do we dwell in marble palaces whose very extensiveness fills one with the sense of an aching void. But our rooms are comfortably furnished, and well heated, and strange to say, we thrive on the repasts provided for us. He who finds much to be discontented at in the home life as we find it is indeed a pessimist. No longer does the student find his freedom of action curtailed by numerous regulations as was the case in the

past. In those times students were apparently possessed of a greater amount of superfluous energy and enthusiasm, and the spirit of self-responsibility was but in its infancy, consequently strict regulations had to be enforced in order to procure discipline and order. But to-day the spirit of self-responsibility has developed to such an extent that the regulations now enforced leave the student practically his own master. He is to all intents and purposes at liberty (apart from lecture periods and study hour) to go where he chooses and to do as he sees fit. Increased order and discipline have followed right in the wake of this movement giving greater freedom to the students. It but remains for us to see that it is improved on in the near future and doubtless we shall receive benefit therefrom.

It is not necessary for me to dilate upon and to describe in detail the numerous advantages which we enjoy. Nor is it necessary to dwell upon any recent improvements, as these have been described in the last numbers of the Review. Just a few brief instances are sufficient. The athlete can indulge in sports to his heart's content and under the guidance of a capable instructor, he gains rapidly in proficiency. The hard working student finds in the capacious gymnasium the various kinds of apparatus for indulging in those exercises so necessary to the retention of good health. Those desirous of a little innocent and gentle recreation can wander into the new sitting-room and there peruse the latest periodicals and journals or listen to some fellow-student exhibiting his musical ability on the piano. The comfort and wants of the students both individually and as a body are

of course looked after by the authorities. Our own organizations, the Y. M. C. A., the Literary, Philharmonic, and Athletic Societies afford numerous and valuable opportunities for self-enjoyment, and so we find pervading the whole residence a spirit of jovial good fellowship and unselfish friendliness indicating a general feeling of content and happiness.

The home-life here presents us with a great opportunity. As stated before it affords us an opportunity to establish the foundation of a successful life. By a successful life, I do not mean one which has for its main object the mere accumulation of wealth,—far from it. Rather do I mean by a successful life, one which we go through with a deep and enthusiastic interest in one's daily occupation; with a broad-minded outlook upon affairs; with a healthful interest in the problems of our country; and, with the welcome hand of friendship ever extended to those with whom we come in contact. Such a life is a successful one, and the home and educational phases of our residence here place within our reach the opportunity to inculcate the essential factors of that life. In studying the science which underlies our profession, we should develop an enthusiasm and pride in our work; in mingling with men from all climes and countries we should learn to regard men and matters with a broad mind; in the intimate association with our fellow-students we should learn to take a sympathetic and friendly interest in those around us; and, the general training together with that of our own organizations should awaken within us a desirable interest in the public affairs. I say should, because, while there are many of us who



Photo by J. W. Jones, '09.

Sunday Afternoon in the Parlor.

avail ourselves of these opportunities, yet there are some of us who do not and the day may come when looking back to our college days, we shall regret that we did not seize the opportunities for self improvement then afforded us.

Let us ever strive to increase the high moral standing, the strong spirit of self-responsibility, and the true democratic spirit which characterize the students of this College. For these are three of the most potent factors which go to make up an ideal home life in any place. They are largely instrumental in producing what our country and what our profession needs, namely, self-reliant, broad-minded, sympathetic and moral citizens.

Literary Society At Home.

For the last three years it has been customary shortly after the opening of the winter term to hold an "At Home" in the Macdonald Hall, the object being to afford to our own students and to the newly arrived students across the way an opportunity to become acquainted, and thus to provide for a

more enjoyable evening on the night of the Annual *Conversazione*, which generally takes place some two weeks later. This year it was rumored that we were to be disappointed in this matter, but finally the necessary consent was obtained and the function took place on Saturday, January 11th.

'Twas a memorable occasion. The many fairy-footed and beauteous maidens flitting along the corridors like so many fairies warmed the hearts of the more ponderous-footed seekers of knowledge from the O. A. C.

The more or less pleasing task of procuring promenades was soon concluded and the various rendezvous became scenes of great activity. At these places a little observation afforded ample amusement. The bewitching smile, the haughty greeting the eager, "I say, old chap, do you know Miss —," the courteous bow, the timid excuse-me, but are you Miss —? No! Well, by jove, that is really too bad, and the smile that won't come off spreading o'er the face of him who has at last succeeded in finding his partner—all these were incidents truly

characteristic of such social functions.

Five musical items were given in the gymnasium. The comic solos by Mr. Hewer afforded much merriment and were enthusiastically encored and the two vocal selections by Miss Belleperche were highly appreciated. Dainty refreshments were served at the entrance to the dining-hall and about half-past ten the evening's entertainment was concluded by the assembly gathering in the gymnasium and singing "Auld Lang Syne."

Seventh Annual Public Speaking Contest.

This annual event which is usually held during the first week in March took place this year on Friday evening, January 17th. The change of date was made with a double object in view, namely, to obtain in some of the short-course students a more appreciative audience and also to relieve the tension of work which always comes towards the end of the spring term. A

large audience was in attendance and an excellent programme was provided.

The general standard of the speeches was high and all the competitors showed remarkable self-possession and ability to satisfactorily answer questions,—features very desirable in an Institute speaker. There was but little to choose between the speakers and it is possible that another set of judges would not have placed the competitors in the same order. Mr. W. L. Smith, Mr. G. A. Putnam, and Professor J. B. Reynolds acted as judges and they decided the order of merit as follows:

1. R. M. Winslow.

"The Ontario Agricultural College and Its Place in Agricultural Education."

2. I. F. Metcalf.

"Farm Help Problem in Ontario."

3. J. W. Jones.

"Education for the Farmers."

4. S. Wilcox.

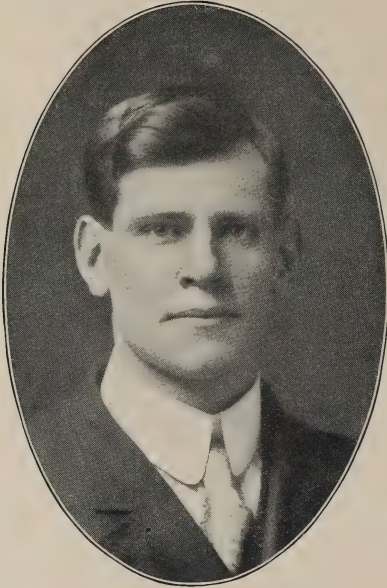
"Wild Birds on the Farm."



Photo by J. W. Jones, '09.

A Corner of the Y. M. C. A. Room.

Mr. F. A. Clowes and Mr. A. D. McIntosh also delivered good addresses on their respective subjects. Such competitions as these form an excellent training for Farmers' Institute



R. M. WINSLOW, '08
Winner in the Public Speaking Contest.

work and they should be encouraged.

The musical part of the programme afforded general satisfaction. The mandolin and guitar duets by Miss H. R. Kelly and Professor C. Kelly delighted the audience. The solos by Mr. Sarvis and the selections by Mr. Metcalf's Orchestra were much enjoyed. The Executive of the Union Literary Society are to be congratulated on the complete success which characterized the meeting.

Improvements.

The recently constructed extension to the Chemistry Building has now been fitted up inside and has been in use for the past few weeks. On the ground floor are two laboratories, one

a large general laboratory for the use of first, second and third year students, and the other, a spacious and specially-fitted up laboratory for work in dairy chemistry. On the second floor there is a new classroom, a milling and flour testing-room, a special laboratory for the fourth year students and an office for the department stenographer. The old laboratories on the ground floor are now used exclusively by the Macdonald girls and by the Fourth Year. We understand the basement under the new general laboratory is to be fitted up for work in analytical geology.

The new greenhouses in the rear of the Biological Building have had the necessary fittings installed and they are now being made use of by the students. There are in all five houses and they should prove very useful for the conducting of departmental research work in Botany, Entomology, and Physics. Third and Fourth Year students will also be enabled to carry on practical experiments in these houses, and thus a long-felt want will be supplied.

EXAMINATION RESULTS.

The results of the Christmas examinations are as follows: The order of merit of only the first twenty in each class is given.

First Year.

1, S. H. Gandier; 2, A. C. Baker; 3, F. M. Clement; 4, W. J. Strong; 5, D. P. Cohoe; 6, A. A. Ewing; 7, W. W. Emerson; 8, F. Martindale; 9, C. A. Galbraith; 10, A. Hutchinson; 11, A. W. Baker; 12, L. R. Martin; 13, R. Schulyer; 14, E. Bradt; 15, W. Toole; 16, W. King; 17, A. A. Toole; 18, J. C. Young; 19, J. B. Whale; 20, S. H. Culp.

Second Year.

1, G. Lelacheur; 2, W. R. Reek; 3, E. H. Aldwinkle; 4, F. C. Beaupre; 5, S. Wilson; 6, H. R. Christie; 7, T. B. Faulds; 8, S. E. Todd; 9, R. L. Moorehouse; 10, R. Fraser; 11, C. Ferguson; 12, A. M. Shaw; 13, C. L. Robertson; 14, J. H. King; 15, O. C. White; 16, J. W. Jones; 18, A. S. Snyder; 19, R. C. Packard; 20, J. D. Tothill.

Third Year.

1, A. McLaren; 2, A. Eastham; 3, W. R. Thompson; 4, H. Sirett; 5, G. H. Unwin; 6, A. A. Knight; 7, A. J. Logsdail; 8, P. E. Angle; 9, G. Diaz; 10, G. H. Cutler; 11, H. C. Duff; 12, C. A. Lawrence; 13, R. C. Treherne; 14, A. D. McIntosh; 15, N. D. McKenzie; 16, R. J. Allen; 17, A. G. Turney; 18, W. D. Jackson; 19, R. A. Boddy; 20, W. H. Irvine.



Photo by A. E. Staler, '08.

The Drive to the College, January 13th, 1908.



WITHOUT a doubt, no association of our College this year has attracted more attention than the Athletic Association, and this should not be surprising when we consider the varied organized departments of sport under its control, which at this season of the year include Hockey, Basket Ball, Indoor Baseball. Fencing, Wrestling, Boxing, Swimming, Water Polo, as well as Indoor Track Work, Calisthenic Drill, and the many exercises peculiar to the use of the German Horse, Parallel Bars, High Horizontal Bar, Vaulting Bar, Ladder, Travelling and Swinging Rings. No student should suffer for lack of exercise this winter and judging from the manner in which the men are turning out for exercise, we feel sure this will be the best year in the history of our Athletics.

A marked improvement in gymnasium equipment should be noted. A new German Horse, two new mats, three Medicine Balls, and a Rope Vaulting Rope have all had a share in making better work possible. The old

paint shop in the basement of the gymnasium has been converted into a first-class wrestling-room. The room adjoining the stage has been nicely fitted up as an office for the Physical Director, and furnished with examining apparatus. Fifty new lockers have been installed in the basement and we might state in this connection that since their being brought into commission the use of the baths has been increased fully three hundred per cent. These lockers prove exceptionally convenient to men who are boarding outside the College residence, preventing the necessity of carrying gym. suits back and forth. At the suggestion of the Association the student body requested President Creelman to permit of a change in study hour from 7.30-9.45 to 7-9.15. The request was kindly granted, and we have every reason to believe that this change will prove highly beneficial to our work as the gymnasium period after study is lengthened from three-quarters of an hour to an hour and a quarter. This has made possible the holding of the

Instructor's Drill at the late hour instead of the afternoons as heretofore, thus permitting the men to use the afternoons from 4.30 in the open air exercises, skating, snow-shoeing and tobogganing and having the gymnasium floor free for the practice of basket ball, baseball, fencing and apparatus work. As an evidence how the increased late hour gym. period is working out, two nights after the change the floor was occupied by ninety men, while previously forty-five to fifty were considered a fair turn out. Here is how the evening is spent: Ten minutes run combined with breathing exercises; twenty minutes calisthenic drill; ten minutes for games, some of the favorites being "Skin the Snake," "Ball Hustle," "Hang Tag;" twenty minutes for apparatus work and fifteen minutes for bath and rub down.

About the middle of December our first Fencing Club was formed and promises to be a live organization. The membership is now about twenty men and others will come in. The Club was very happy in their choice of officers, Mr. Marryat being appointed manager and Mr. Thompson secretary-treasurer. These men having had some previous experience in the art of fencing and being most enthusiastic in its praises, should be a big factor in pushing this fascinating exercise to the front. The Physical Director conducts classes Tuesday and Thursday afternoons from 4.30 to 5.

A Wrestling Club is about to be organized, and with our excellent facilities for conducting this sport, we will no doubt turn out some good men by the end of the season. Moorehouse should be hard to beat in the heavy-weight class, and Mike Lewis, the winner of last year's tournament will

no doubt make things interesting in the welter-weight. Classes will likely be conducted Wednesday afternoons at 4.30.

Another series of Indoor Baseball will be arranged in the near future. Each of the years will be represented and we are just waiting to hear from the Dairy School Course men before drawing up the schedule. It is to be hoped the dairymen will come in, and they may make things interesting for the year teams, as they are known to have some very fair material.

HOCKEY ATHLETICS.

Varsity II. vs. O. A. C.

The College hockey season was opened according to schedule by a game at the Royal City Rink on the evening of January the tenth. The match itself was not altogether a satisfactory one; at the beginning and during the early stages of the game our boys were clearly outclassed and out-scored, but as the game progressed O. A. C. brightened up considerably, and individually held their own, but still lacked combination.

Varsity II Beat Guelph.

Varsity II. defeated Guelph O. A. C. in an intermediate match in the Inter-Collegiate Hockey Union at Mutual Street Rink on Friday afternoon, Jan. 17, by 15 goals to 2. As the Toronto collegians won the game in Guelph by 9 to 3, they have a margin on the round of 19 goals, which about represents the difference in the teams.

Guelph, O. A. C.—Goal, Hoffman; point, Johnson; cover, Edgar; rover, Cunningham; centre, Foster; right wing, Christie; left wing, Middleton.

Referee.—H. Clarke.

Our Old Boys.

THIS month we present to our readers a cut of a sep-tette of the class of '74, copied from a photograph taken thirty-four years ago. These students encountered conditions which when compared with what the present students enjoy, seem unbearable. Then the daily routine was, during the spring, summer and autumn months, for the class of '74 remained at the College during the entire year, work from 7 a.m. until 6 p.m. with sometimes instruction in the theory of scientific agriculture in the evenings; and during the winter, work every morning and lectures during the afternoon. Then the luxury of warm water for a "tub" was given as a reward for prolonged service at the handle of the kitchen pump. When a tapping was found necessary, and that institution was in vogue even at that early date, the culprit had not the privilege of repenting of his rashness and resolving to change his ways while being hurried to the loving embrace of an inviting

enameled bath-tub, nor of being plunged into a watery environment which, though chilling, still bore the tag and seal of the sanitary officer guaranteeing its freedom from undue bacterial contamination. In the good old days he was unceremoniously conducted to the horse trough. while lusty arms worked at the pump handle in preparation for his reception. The result, however, was the same then as now; the victim thereafter changing the tenor of his ways. Of those portrayed above two have been removed

from earthly cares. The other five are all showing the marks of increasing years yet retain a vivid recollection of the days they spent on College heights.

Beginning at the upper left-hand corner the first figure is that of H. J. Coate, who came to the College from Toronto. He is now farming on the shore of Lake Rosseau, his post office address being Rosseau. On his left is Harry Rhind, whose home was at Niagara-on-the-Lake. His career was cut short while still at College. his



Seven of the Class of '74.

death occurring in March, 1876. In the upper right-hand corner appears George H. Shaw, who is now Traffic Manager for the Canadian Northern with headquarters at Winnipeg. On the left in the second row is F. D. Canfield who afterward took up the study of medicine and is now practicing at Ingersoll. In the centre is T. H. Mason, who is well known to many of our readers as a prominent Institute worker. He is farming at Staffordville. On the right is Jordan Palmer, who came from Norwich, Ont., and is now farming near Petrolea, Lambton County. The figure in front is that of Hugh Montgomery, late of Woodstock, who afterwards came to a tragic death by drowning in the Thames river near Beachville.

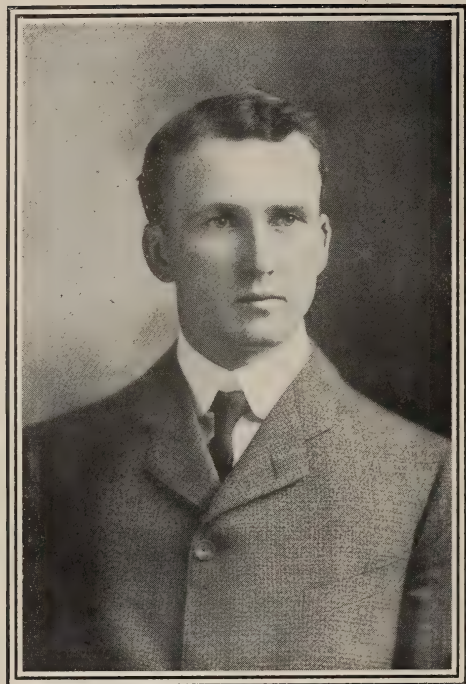
C. W. Esmond, '05. Those who knew, and because they knew accorded their sincerest friendship to the quiet '05 man have been watching with interest while he steadily but surely was forcing himself upwards in the scale of public esteem. As editor of "The Maritime Farmer," and later as a member of the staff of the "Nor-West Farmer" he has exhibited his abilities in journalism. Though he undoubtedly found the work engrossing, it was not to be expected that it could permanently claim his whole attention. So that a whisper which was heard in the Review Office proclaiming a certain coming event did not come altogether as a surprise. Esmond got much during his course at the College that will help him in life's battles, but that which he acquired after the closest attention and which only came to him fully and unreservedly a few weeks ago we prophesy will prove of

greatest benefit and aid in smoothing away the obstacles to be overcome in the future.

The marriage of Mr. Carmen W. Esmond, B. S. A., to Miss Helen Mac Card, an '06 graduate of Macdonald Institute, was celebrated at the home of the bride's parents, Wicklow, Ont. on January first, in the presence of a few relatives and close personal friends. The bride was attended by Mrs. Race and Miss Effie Esmond, while Mr. Winter, of Wicklow, a former student of the O. A. C., supported the groom. After the wedding the happy couple left for their future home in Winnipeg bearing with them the heartiest wishes of their many friends among whom the Review begs leave to be numbered.

J. J. Ferguson, '94, was first employed by the Swift Packing Co. as head of the Nutrition Department, but his executive ability has since been recognized by placing him in charge of several departments. His position is now an extremely responsible as well as a lucrative one.

Wm. B. McCallum, '94, has since taken up post graduate work at Chicago University, where he secured his Ph. D. in '04. After securing his degree he was retained on the staff at Chicago for a short time. He left Chicago to accept an appointment on the staff of the Experimental Station at Tousaw, Arizona. Since going to Arizona he has devoted considerable time to the study of the flora of the arid regions of that state. We understand that he has recently decided to lighten life's burden by taking unto himself a partner with whom he may share his joys and sorrows.



J. A. McLean, B.A., B.S.A.

Wm. Linklater, '00. The State of Washington was but following the example of her sister states when she secured as the head of the Live Stock Department of her Agricultural College, at Pullman, a graduate of the O. A. C. In her case W. Linklater of the century class was the man selected, and already his influence is making itself felt. Last fall he prepared a team for the stock judging contest at the Chicago International where they made a very creditable showing. After the International Mr. Linklater made a short visit to Ontario, spending a day in Guelph renewing old acquaintances.

O. A. C. Alumni who attended the College in 1903 have warm recollections of J. A. McLean, whose capable and tactful administration as Dean of the Residence in that year demonstrated his fitness for the opportunities

of promotion and emolument which the neighboring Republic ever holds out to bright Canadian youth. Native of Dundas Co., Ont., he graduated with the B. A. degree from McMaster University, Toronto, in 1902; succeeded Mr. (now Professor) W. J. Rutherford as resident master at the O. A. C., in 1903; went to Ames Iowa, in January 1904; and secured his B.S.A. from the Iowa Agricultural College in 1905. The further West called him, and in 1905-6 we find him filling the chair of Professor of Animal Husbandry in the Colorado Agricultural College, whence he returned in the fall of 1906 to accept the position at a larger salary of Assistant Professor of Agriculture, in the Iowa State College.

As if to cinch his claim on McLean's services, Uncle Sam has now given him a daughter in wedlock. On June 12th, 1907, he was married in Chicago to Miss Margaret Prendergast, of Fort Collins, Colorado; and Professor and Mrs. McLean are now at home at No. 720 Iowa Street, Ames, Iowa. Though captured, he is not conquered, Mac still has an eye northward, and a loyal Canadian heart beats under the slight traces of exterior Americanization, but for which he is the same genial McLean as of yore. Here's wishing him a speedy return, and a hearty welcome back.

A. M. High, '99. After graduating High did not remain long in Ontario; but soon entered the services of a lumbering company operating in Manitoba. That he found the work congenial and himself suited to it, is evidenced from the fact that Mr. High is now the proprietor of an extensive lumbering business with head-quarters at Killarney, Man. He is visiting the East this win-

ter and spent the New Year visiting friends at the College. During his visit Mr. High remarked upon the many improvements he noted in the different departments.

W. T. McDonald, '03. After graduating McDonald went to Minnesota as assistant editor of "The Farmer" under Professor Thomas Shaw. In 1906 he went to Ames, Iowa, to take up post graduate work. From Ames he went to Stillwater, Oklahoma, as Professor of Animal Husbandry at the Oklahoma State Experimental Station. That he did not devote his time exclusively to the study of agriculture while in Minnesota is evidenced by the following announcement:

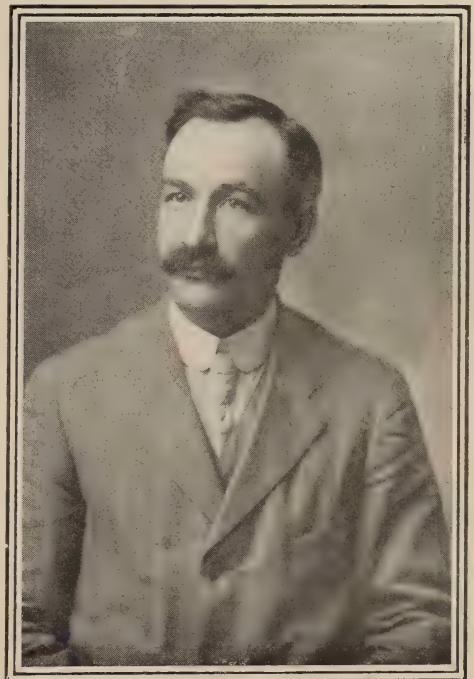
Married—On December twenty-fifth at Farmington, Minn., Florence Belle daughter of Mr. and Mrs. Hamilton Harris Judson to William Thomas McDonald. The happy couple will take up their residence in Stillwater, Okla. The Review extends congratulations and wishes long life and prosperity.

G. A. Brodie, '90. After graduating Brodie returned to his farm at Bethesda Ont., where he has since conducted one of the model farms of Ontario. He early began to make a specialty of pure seed grain and pure bred live stock. Of late years he has engaged extensively in importing Clydesdales, in which he has met with marked success. At the meeting of the Experimental Union in 1906 he was elected to the board of management and at the meeting last December was chosen as its President. We look forward to a year of progress for the Union under Mr. Brodie's directorship.

T. A. F. Wiancko, of the class of '98

until recently was engaged in running a creamery, at Sardis, in the Chilliwack Valley, B. C. Recent reports from the West state that he has moved to Vancouver to go into an extensive dairy business with "Jack" Livingston, '00. With T. A. F.'s experience in dairying the venture cannot prove other than successful.

T. E. Miller, an associate of '01, after obtaining his diploma was, for a few years with the Gould, Shapley & Muir Co., Brantford. He has recently purchased a comfortable holding at Bridgeburg, where he will devote all his energies to the pursuit of up-to-date agriculture. In order that he might be in the closest touch with the latest developments in agricultural science "Tom" spent several days in Guelph last December attending the meetings of the Experimental Union and the



G. A. Brodie, B.S.A.

Winter Fair. With the exception of a slightly fuller figure and the addition of a hirsute appendage he is unchanged since the days of '99-'01.

H. D. Kewley, of the class of '97, is farming near Sarnia, Lambton Co., and as of yore is an enthusiastic exponent of progressvie agriculture. Mr. Kewley has so overcome the native reticence of character which marked him while at College as to become a valuable member of the Farmers' Institute staff in Western Ontario. In thus car-

rying the benefits of the training he received at the College to the farmers of the community Mr. Kewley is doing much for the advancement of agriculture in Lambton Co.

John Naismith, of the class of '96, is engaged in a calling which is but remotely connected with agriculture. But we have no doubt that the training gained during his course at the O. A. College will find its application in his superintendence of the business of The Naismith Confectionery Co., Stratford.

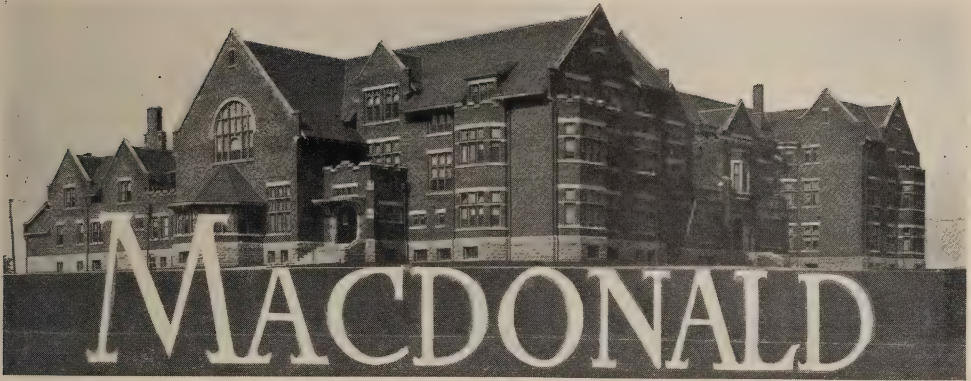
SNOWFALL.

Down drops the snow. the fleecy hooding snow,
 On town and wood and haggard, wind-blown space,
 And hushes the storm, and all weird winds that blow
 Upon the world's dead face.

Like the great rest that cometh after pain,
 The calm that follows storm, the great surcease,
 This folding slumber comforts wood and plain
 In one white mantling peace.

So when His winter comes, His folding dream,
 His calm for tempest-tost and Autumn-lorn;
 'Twill gently fall, as falls by wood and stream
 His snows this winter morn.

—*William Wilfrid Campbell.*



A Country School Equipment.

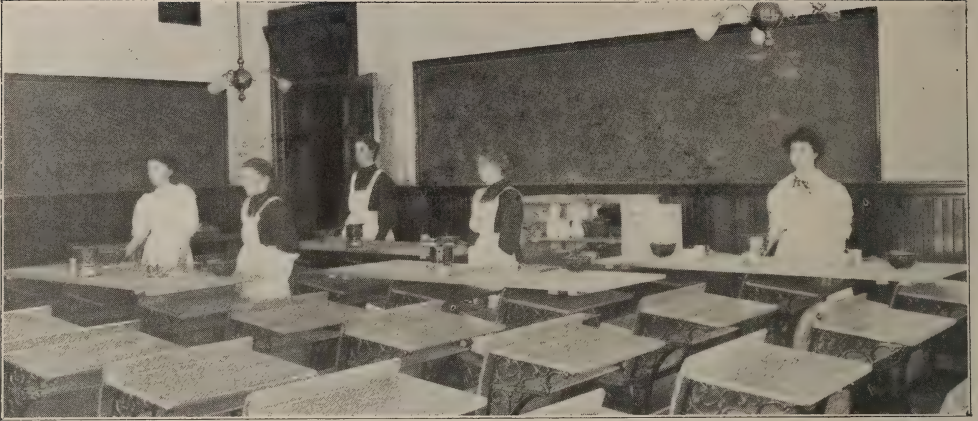
By G. GREENWOOD.

VERY soon after starting my work at Macdonald Institute, Miss Watson spoke to me of her very strong desire to have worked out, a simple, portable equipment for the purpose of teaching cooking in rural schools, if need be, utilizing and adapting to this special purpose the ordinary school room with its usual equipment of desks, teachers' desks, etc. From experience in using a similar equipment (worked out with the aid of my school board) in a country town in Massachusetts, and the much more elaborate equipment common to city schools, I had become convinced that the average equipment was far more elaborate than was necessary, or desirable, if we wish to develop any originality or resourcefulness on the part of our pupils, and was therefore very glad to aid in working out the problem with the results here given.

The trestle, tables, forming the bulk of the furniture, can be so easily moved that used in an empty room, they may be placed in any form desired

to give the fair arrangement, the hollow-square arrangement, shown in one of the illustrations, or any arrangement advocated by the teacher or compelled by the character of the room. The table-tops, being detachable, may be used without the trestles in an ordinary school-room laid across the tops of the desks, each top covering three desks. The children standing in the aisles to work. The long boards half the length of the table-tops, laid on cleats half way down the trestles, gives extra shelf room, if desired. The table-tops and shelves are of cypress wood, and are an experiment, since cypress is a new wood to be used for this purpose. But it was recommended to me by a lumber dealer in the city as especially adapted to withstand the effects of heat and moisture without being any more expensive than the woods ordinarily used for cooking school tables—maple, whitewood, birch.

The individual equipment, composed of utensils needed for constant use by each pupil, is kept in medium-sized



Equipment Used in an Ordinary School Room.

Photo by E. J. Zavitz.

square butter-boxes, used for packing and shipping butter, the larger utensils being piled on the floor of the box forming a nest of utensils, while the smaller ones are held in place, on the sides of the box, by strapping of enamel cloth, much after the fashion of the English travelling tea basket.

The general equipment, containing only such extra utensils as are absolutely necessary for good work, is kept in a packing box, which is turned up

on end, and fitted with shelves and a door.

The small kerosene stove, seen in the illustrations, solves the problem of individual stoves where gas is not available. The kind selected, of German make, is so steady with its firm, round base, that there is no danger of falling sauce-pans, and so simple that it may be as easily cleaned as a lamp. These stoves, half full of oil, will burn two hours at the cost of a quarter of a



Equipment, when not in use.

Photo by E. J. Zavitz.



Use of Equipment in an Empty Room,

Photo by E. J. Zavitz.

cent an hour. If there is a coal or wood stove in the room, which can also be used, so much the better, as it will give additional cooking space and be of use in heating water.

In most rural schools, there would be no running water in any room used for this purpose but it is usually near at hand in lavatory or basement sink, so

that no obstacle is presented in this respect, since it can be brought in in buckets or pails, in any quantity desired.

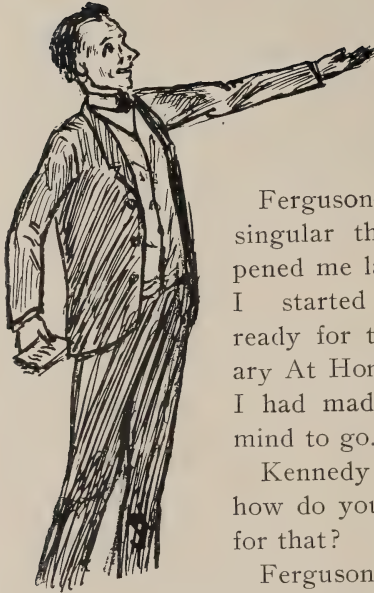
This equipment has not been worked out for illustrative purposes only, but will be used after the February promotions for the practice classes coming from the public schools of the city



Utilizing the Equipment for a Table-Setting Lesson

Photo by E. J. Zavitz.

Locals.



(At the P----- Contest) Mr. Chairman, Ladies and Gentlemen—Lend me your ear.

Ferguson—A most singular thing happened me last night. I started getting ready for the Literary At Home before I had made up my mind to go.

Kennedy — A n d how do you account for that?

Ferguson — I suppose it must have been “instinct”!

N - - n - - k, on phone—Do you know who is speaking? Do you recognize the voice?

Nurse—I am afraid I do not.

N - - n - - k—Do you remember Dan Johnson, who was in the hospital some time ago?

Nurse—Oh, yes! I recognize the voice now. How are you, Mr. Johnson?

N - - n - - k—Well, this is not Mr. Johnson—it is Mr. N - - n - - k.

Possibly the best play of the hockey season was that made by Snyder at the match between Upper and Lower Pantton.

At a crucial point in the game the puck was shot for goal, but he made a brilliant stop. Then instead of striking it off to the side he shot it through his own goal posts.

Walker (at Practical English)—The scientific name of Alfalfa is Medicago “saliva.”
(Allen and Angle Arguing on Cremation vs. Burial.)

Allen—When I was a kid I had a terrible horror of being buried alive. Time and again I lay awake at night afraid to go asleep for fear I might die before morning and be buried alive.

Some writers make their readers feel Provided with a good square meal; While others—such a task is mine— Supply the walnuts and the wine, A sip of truth—the merest smack— A pinch of salt, a nut to crack.

—P. E. L.

N - - h - ll—Aren't you going to the At Home?

W - l - - n—No!

N - - h - ll—You should put yourself under the softening influence of—

W - l - - n—Is that what makes you so soft, N - - h - ll?

McL - - n - n (on a "certain" day)—
Please pass me the crusts.

R - - e—You're crusty enough now.



A Suggestion to Leap Year Maidens.

My Dear and Most Respected Sir,
I send you this your love to stir;
You, have I chosen first of all
On whom to make my maiden call;
I've given you the foremost chance,
So you may freely make advance;
Your heart, and hand, and all the
rest,—

I hope you'll grant me my request,
And send me back without delay,
An answer saying yes or nay.
But if your heart does not incline
In wedlock kind to join with mine,
Then you must leap year laws obey,
And down to me \$5.00 pay;
Besides, Dear Sir, a handsome dress,—
I ask no more, and take no less.
Now, you will think this letter funny,
But I must have a man or money,
So now, Dear Sir, send your reply:
Let me be yours until I die.

Your Hopeful Mary.



Who says a Freshman hasn't manners!

At the recent Literary At Home a certain young lady on the Introduction Committee received a profuse acknowledgment for making one of these gentlemen acquainted with some of her friends. Bowing till his nose almost touched the floor, he uttered, in a most gratified tone, "Thank you, ma-a-am!"



Mr. Orser wishes it to be distinctly understood that the item in the last number referring to him was not true to fact. He says that the other fellow by answering his question would have been the ass falling into the pit.

In our journey through life we all meet some difficulties, but the Local Editor feels that he has an extra number to face. On the evening of the appearance of our January number a big, burly Freshman, over six feet tall in his stocking feet, crammed his head into a room on Craig Street and asked in a decidedly threatening tone, "Where'll I find that short Local man?"



Professor H - - t—In moss roses you can't prune back very far or you'll cut off all your "blooming" wood.



A Tragedy.

The boy sat in the dining hall,
Whence all but him had fled—
He wiped his eye, and heaved a sigh,
And wished that he were dead.
"Why did I leave my happy home,
Where I got lots to eat?—
There were no Diptera puddings there,
Nor India-rubber meat.

"When I was home, you bet your boots,
I didn't live on air!
But here at meal-time all I do,
Is taste, and smell, and swear."

Five times the Dean did ring the bell,—
The student answered not,
His face grew pale, he looked like—
well.

I guess I won't say what.

And then the worn-out student drew
One last, deep, gasping breath.

* * * *

His tombstone bears this epitaph:
"A Freshman—starved to death!"
—R. F.

(Ed.—This resurrected poem will give present-day students some idea of the hardships endured by our "Old Boys").

(In Physics, discussing the kinds of energy from a falling body in its course to the earth).

Professor—When it strikes the earth what then, Mr. Hoy?

Hoy—It will stop!

Professor—If that's all you know about it, you may soon be "stopped."

Professor (while working out a Heat problem on the board realizes that considerable noise is going on)—You gentlemen better pay attention or this Heat may make it "too hot" for you!

"John" Winckle (sitting down to supper)—For the last hour and a half I have been discussing Love with Shaw and Lewis, and I find that Lewis holds altogether different views from Shaw and me.

Freshman (to Soph. just before the Xmas Exams.)—Say, what does it mean to be "plucked," anyhow?

Second Year Dairy Exam.

1. Give, verbatim et literatim, Part II. of "Canadian Dairying."

2. Describe minutely each and every machine in the Dairy Department.

3. Give in detail all the methods for testing cheese, milk, cream, whey, skim-milk, and butter-milk.

Short Course Maiden (in cooking class)—Does this recipe make enough for two?

Mr. Crow—What kind of an apple-tree is that?

Pritchard—Peter.

Mr. Crow—Who can give another name for this tree?

"Mike"—Pete.

Revell (examining poultry)—What long "gills" that bird has?

Can anyone explain why W. Smith breaks out in his sleep with "Caw! Caw!"

Daly says he studies Pathology so that he may be able to "di-agonize" a case. For example, if a horse had "ammonia on the lungs" he would give the owner a "subscription."

There was a young fellow named "John,"

Who a pair of big snowshoes put on;
Some distance he went, when one shoe he rent.

And the fun for Aldwinckle was gone.

Also a young lady named—well,
I think that I'd better not tell;
Her snowshoe it broke, and John thought it no joke—

The return trip was not quite so swell.



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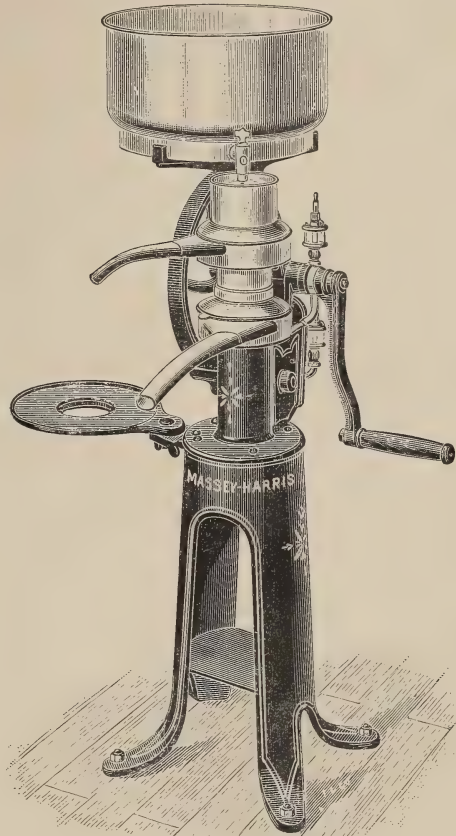
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WATERLOO, ONTARIO.

Branch Office and Warerooms—

WINNIPEG, MAN. and REGINA, SASK.

(At Geology Lecture)—Can you tell me where we find Apatite?

Light—Please, sir, in the dining hall.

We understand that W - l - - n is planning to organize a crusade against ladies (?) who wear birds or birds' feathers on their bonnets. We suggest that he engage the assistance of Carrie Nation, whose methods would no doubt ensure the success of the undertaking.

REED BROS.

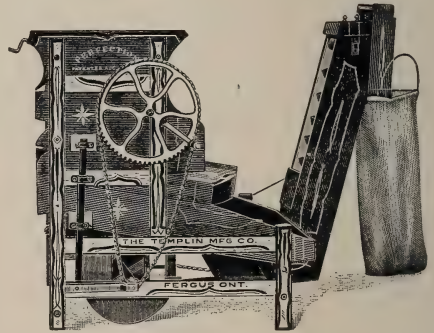
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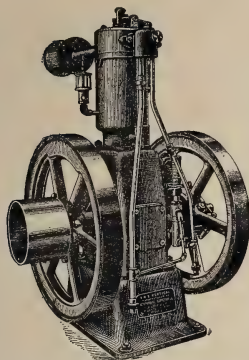
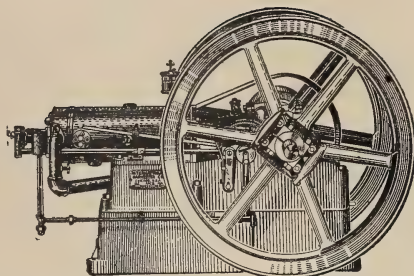
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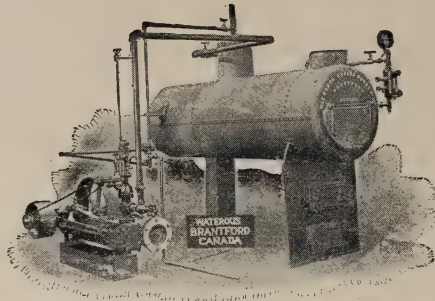
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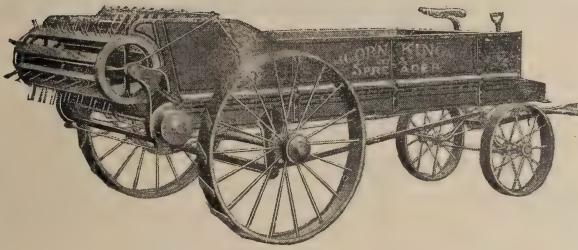
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MONDAYS AND WEDNESDAYS

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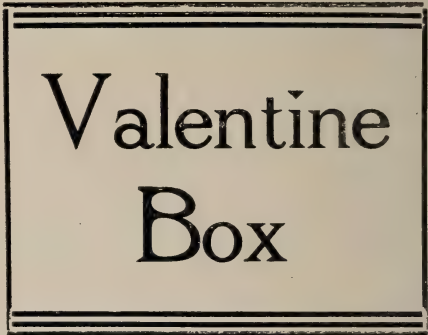
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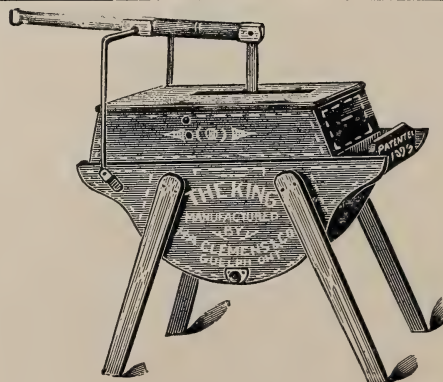
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United Typewriter Co. Ltd.

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— FOR —

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TORONTO**

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LOWNEY'S CHOCOLATES

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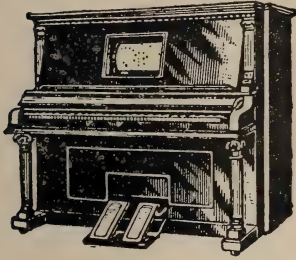
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and prices are
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Manager Guelph Branch

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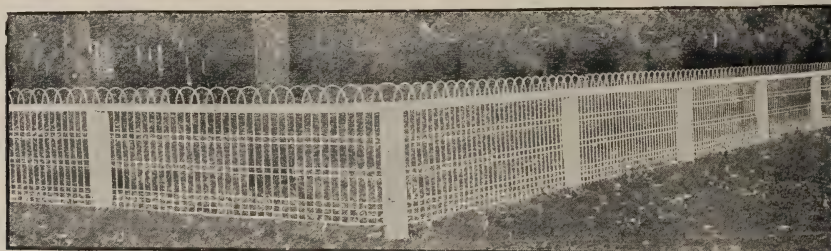
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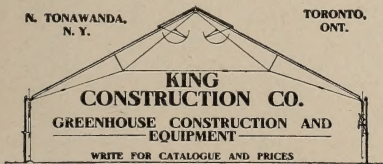
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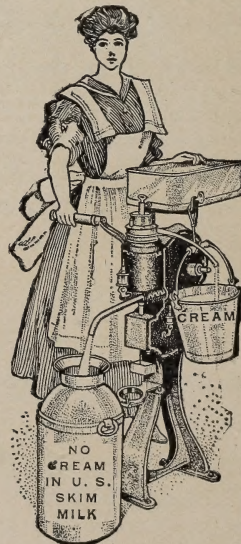
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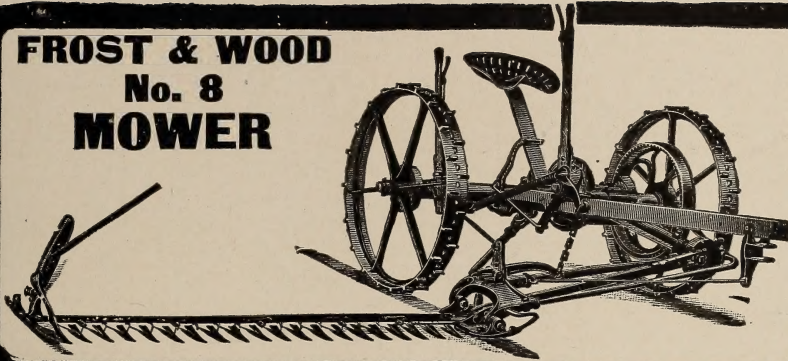
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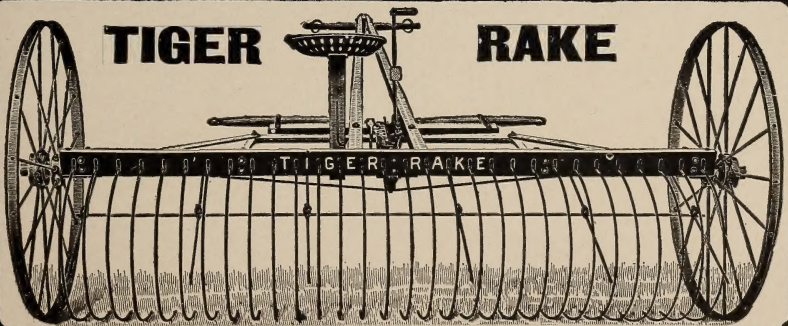
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